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Should Attending Hospital and Dispensary Physicians be Remunerated?

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

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The writer feels qualified, to some degree, to express an opinion upon free and paid professional service to hospitals and dispensaries, after having rendered free service to a number of hospitals, free dispensaries and medical colleges of Chicago for more than thirty years. Probably no one has contributed such service more enthusiastically than he has.

There are two very serious sides to the question, and I shall endeavor to present them in such a way as to give an intimate insight into this kind of work, if I may be allowed to bring forward my personal experiences.

While I was serving on the staff of the South Side Free Dispensary, in connection with the Northwestern University Medical School, among the charity patients was one who was suspected of imposing upon our free service for the worthy poor. A watch was put upon him, whereupon it was discovered that he was a prosperous proprietor of a livery stable located not far from our clinic. After discarding the hobo clothing, which he wore to the dispensary in order to deceive us in respect to his financial status, he blossomed out like a full-fledged political boss.

I had many similar experiences during my service of more than fifteen years on the staff of the Illinois Charitable Eye and Ear Infirmary. Patients could not gain admission to our clinics without first making an affidavit to the effect that they were too poor to pay anything for medical attendance. Notwithstanding this precaution to prevent the well-to-do class from taking advantage of our charity, patients rode there in their own carriages, some of them dressed in silks, satins and sealskin garments. When questioned as to the apparent incongruity of their appearance and their application for free service, they would offer quite a variety of explanations, among which, I remember, was this: "I was burned out, and all I have left is what you see." The lay officials (not the attending surgeons) were supposed to follow up such cases and to prevent wealthy people from imposing upon the young doctors, some of whom were in straits for money to pay their rent, but investigations went no farther.

I had the temerity to tell one patient, whom I was examining, that I did not believe he belonged in the charity class, for whom the hospital was maintained by the State. When I explained to him that the young physicians there gave their services gratuitously, he questioned my veracity in choice billingsgate and declared that he was entitled to free treatment because he paid taxes on his coal property and residence to help support the charity. His evident moral obliquity seemed to blind him to the gross injustice of accepting charity at the hands of young surgeons with little means, after he had committed perjury to gain admission to our charity clinic.

To emphasize this aspect of the question, I will mention some facts that are not generally known: One of the assistant surgeons who was giving gratuitous service to the eye department committed suicide because the returns from his practice failed to afford him a tolerable living. Another assistant, who was wallowing in the quagmire of financial eclipse, took to borrowing money of everyone who would loan, went wrong still farther and brought up in the cell of a police station. The writer succeeded in obtaining his freedom, with the consent of the prosecutors, on his promise to go west to a relative and make good as a hotel clerk—which he did. Another, who enjoyed the princely income of $75.00 per month from his practice, finally saw this dwindle until he was glad to accept a night clerkship in the post office, to which he has clung with admirable tenacity ever since, always cherishing the elusive hope of sometime returning to the practice of medicine. Still another, who was highly educated in the schools of this country and the special clinics of Europe, and who applied for a position on our staff, although he never actually served there, finally abandoned the profession and spent the remainder of his life in mercantile pursuits. I bring these facts to light, not because I am a pessimist, but because they fairly illustrate the tragic side of a medical career in the public service, the side which every one should know and should do his share to prevent or alleviate. Men who spend the best part

of their lives in acquiring the necessary knowledge and skill to serve those who suffer should receive as much consideration as they show others. The rank and file of the medical profession are worthy of the best this world affords. The average doctor, so far as my experience indicates, is above the average man in intelligence, education, honor and self-sacrifice, and every possible safeguard should be interposed between him and oppressive imposition on the part of that immense public that throngs our free dispensaries and hospitals. I have been required to treat a large number of wealthy people free because of my staff positions—people whose fees would have lined my pockets with gold, had they paid me the customary fees. Even members of the Legislature, upon whose votes the appropriations for the maintenance of our infirmary depended, honored me with the acceptance of free treatment in our charity clinic, as did many other political patriots. Why should men, merely because they have chosen a medical career, be expected to do a vast amount of skilled labor for nothing for people who crowd out the worthy poor who are helpless, and who must be served gratuitously or not at all? There is no corresponding free service in law or mercantile pursuits. To be sure, I have lived this life of free service, and I do not regret, in the least, all the years I have given to those who were honestly entitled to it. I would do the same again. But I have given a fortune in work to those who were far more able to pay than I was to give. There's the rub.

I have cited these experiences only as a theme upon which variations could be multiplied many times. Such impositions as are mentioned discourage well prepared men from doing the hard work—drudgery, they call it—for these same people who are well able to pay should be treated in the private offices of physicians. However, no such suggestion is permitted to be made by the hospital attendants to the patients who are able to pay, and an attendant who would advise such an imposter to come to his own private office would be disciplined, in case it was discovered. So, the staff physician, particularly if he be poor, smarts under the rank injustice of the system.

Moreover, it is difficult to induce competent, experienced doctors to conduct clinics with military punctuality and to give the necessary time to the trying work when they can see no financial remuneration. Experience and the satisfaction that comes from a duty fulfilled are the principal compensations; but such doctors already have the experience. Of course, there is a possibility of extending one's reputation by hospital and dispensary connections and making these stepping-stones to a professorship, and that consideration is worth something; but when men have acquired the coveted experience and reputation sufficiently to insure a successful practice they are prone to relinquish the clinical work and make way for the younger and less experienced men.

Here is an illustration of certain conditions: I have examined eighteen new cases in my afternoon clinic in the ear, nose and throat department of the Illinois Charitable Eye and Ear Infirmary and have had eighty-seven patients waiting for treatment, manifestly too much work for one man to do. Sometimes I have had the help of five or seven or, occasionally, eleven personal assistants in treating these patients, and, at other times, no assistance whatever. It is only fair to state that this line of practice is more difficult, less fascinating and less satisfactory, as far as some ear diseases are concerned, than eye work; but the fact remains.

Now, I yield to no man in the sincere sense of pleasurable duty to the helpless sufferers of our race, but I have had the conviction for many years that the poor only should receive free service and medicines, and that those who are able to pay for either, or both, should remunerate their medical attendants according to their actual ability to pay. This remuneration could be turned into the treasury of each institution and distributed periodically among the members of the staff pro rata. This method would insure a sense of self-respect on the part of the patient who can pay something, but who can not pay the usual fees, and would give a fair remuneration and encouragement to the doctor who earns now what he does not get. Patients who are able to pay the customary fees should be excluded altogether from the charity clinics as a matter of justice both to the clinical attendants and to physicians who have no hospital or dispensary connections, but who have families to support from the proceeds of their practice. "The servant is worthy of his hire."

ATTENDING PHYSICIANS OF HOSPITALS AND DISPENSARIES SHOULD BE REMUNERATED.

W. L. Estes, M. D.
South Bethlehem, Pa.

Modern social conditions require readjustments of customs in many instances. The altruism of physicians moved them to offer their services gratis to eleemosynary establishments for the care of the sick and injured in the early days when these establishments were truly charitable institutions and were supported by uncertain voluntary contributions of individuals and communities. Modern hospitals in the United States are now rarely purely charity institutions, but are conducted for the most part on endowments of legacies or on municipal and State budgets. They are organized on business principles and their trustees expect them to earn their expenses either in the way of fees from patients or through returns as locales for teaching.

There is no altruistic reason why physicians should give their time and experience to such institutions.

Modern hospitals are of five kinds:

1. University hospitals, that is, hospitals connected with the medical departments of universities or colleges for the purpose of teaching students, who pay for their instruction.

2. Municipal and State Hospitals.—These are establishments organized for the purpose of caring for the sick and injured dependents of a city or State in a more economical and efficient way than at their homes, and are managed by boards of governors appointed by the municipalities or States.

3. Church Hospitals.—These are institutions established by various religious sects because of their idea that the tenets of their churches may be best carried out or promulgated if sick and injured people are segregated under the influence of the practice of their special belief. Boards elected from the individual sects manage these.

4. Endowed Hospitals.—These are special or general hospitals managed by a self-perpetuating board of trustees and supported by the proceeds of a fund or funds bequeathed or given to them by some wealthy person or persons.

5. Private Hospitals.—These are established by individuals as commercial enterprises. They are not considered in the discussion.

Let us analyze the chief conditions of these several establishments.

1. University Hospitals.—The attending physicians in these hospitals are as a rule paid members of the

teaching staffs of the medical departments. Their service is primarily to the university. They are paid.

2. Municipal and State Hospitals.—As a rule State hospitals pay their attending physicians. Municipal hospitals do not. The physician-for-the-poor of a county, who theoretically is responsible for the charity wards of the county, is paid a salary and he attends the indigent patients at their homes. Practically it is impossible for one man to attend properly to all the indigent cases in a populous county. These cases must be collected and treated *en masse* in order to give them efficient and economical care. There is no earthly reason, except the complaisance of physicians, why municipalities as well as States should not pay the attending physicians for their time and attendance; it would simply be carrying out the principle of pay to the poor physician.

3. Endowed Hospitals.—These institutions rarely have funds sufficient to carry on the work of the foundation; they eke out an income by (a) private patients, (b) voluntary contribution, (c) by various methods of beguiling dollars from the pockets of the community, (d) State or municipal aid.

4. Church hospitals are supposed to be supported by endowments and contributions from the church or members of the sect to which the institution belongs. As a matter of fact, they are usually assisted by the community and frequently by the State. They also usually receive and treat private patients and derive some income from this source.

As regards the medical staff, these hospitals are of four kinds.

(a) "Open" Hospital Staff.—That is to say, any physician may have the privilege of sending a patient to the hospital and treating him there.

(b) A rotating staff of large size. This arrangement usually assigns several physicians and surgeons to the same service, but provides that each member shall serve a prescribed period, usually two or three months, and then be succeeded by another number, thus dividing the year into four or six service periods.

(c) A permanent visiting staff. This disposition divides the service in the hospital into (1) medical (2) surgical, (3) specialties, and assigns a chief to each division and allows him a sufficient number of assistants to carry on the work of his division. This service is continuous.

(d) A permanent resident staff. Consisting of a chief, assistants and consultants. The chief has general oversight and control of all departments and carries on the work of the various specialties by special assistants or consultants. A staff organized in this way is usually paid.

So the question of pay for hospital staffs comes down to the archaic forms of hospital management which are called the open hospitals, or the rotating staff hospitals, and to the permanent visiting staff hospitals.

The great difficulty in settling this matter comes from the medical profession itself and appertains chiefly to the municipal and church hospitals. Physicians eagerly seek hospital connections and so oversupply hospital boards of management with offers of service that the boards consider the selections they make for the work a matter of favor. So glad have physicians hitherto been to receive these appointments that they never dared hint at any direct remuneration. The argument has been that these hospital positions pay indirectly by the advertising and prestige they usually carry with them in the community; also by the educational opportunities they furnish the incumbents. This is in a measure true. But it can only be true when there is an oversupply of physicians in a community, and when the undergraduate training of the physicians has been inadequate. These furnish the crux of the whole matter as regards the physicians themselves, but these conditions are rapidly changing.

Medical colleges and State laws are requiring more preliminary preparation for medicine and a far more efficient medical training. So stringent have these requirements already become that the number of graduates in medicine has been reduced about 30 per cent in the last ten years. This will continue until the numbr of physicians graduated or who go into the practice of medicine will more nearly reach the level of the requirements of the country. When there is no oversupply and adequate preparation physicians will expect to receive some immediate renumeration from hospitals for their time and service.

The argument, as the condition of affairs at present stands, is much stronger from the standpoint of the efficient management of the hospitals themselves.

A general hospital may be regarded as a modern medical department store. It must not only have its several departments well equipped and well stocked, but have in charge of them men thoroughly alive and adequately prepared and experienced, and who will give their whole time to the work, in order to have the establishment succeed. This can be brought about only by paying the heads of the departments sufficiently to satisfy them and to retain them if they prove especially efficient. Frequent changes would inevitably lead to the introduction of different ideas, methods and conduct. This would lead to irregularity, confusion and entire lack of method or continuity.

To open the wards and apartments to any physician who may send a patient to the institution would be like giving any petty merchant the privilege of dumping a special stock of goods which he could not manage to dispose of outside into the big department store and then go there and use its facilities for the disposal of his goods. Every man with common sense knows this would result in chaos and utter confusion.

It will be generally conceded that hospitals should be conducted on business principles and after the best modern scientific methods, therefore their staffs should be carefully selected and their members be retained as long as they prove their worth and efficiency to be equal to the standard of the best institutions of the kind in the country. To retain such a staff it is necessary to pay the members adequate salaries.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

HAROLD HAYS, M. D., F. A. C. S.
New York.

Yes.

There is no class of professional men who do so much work for nothing as doctors. A great deal of this work is poorly done, mainly because there is no incentive to do good work except in so far as the physician's position in the hospital depends upon his work.

The average dispensary class to-day is controlled by a man who does not need to be remunerated, but most of his detail work is attended to by the younger men, many of whom are finding it exceedingly difficult to make a living.

The payment of physicians would be of benefit to the physician, to the patient and to the hospital.

First.—*Advantage to the Physician.*—In the first place, deserving work deserves remuneration. Many of the dispensaries at present are run inefficiently.

There is a great deal of inattentiveness on the part of the younger men and very little attention, if any, is paid by the older men who hold on to their jobs much longer than the age limit should allow. It frequently happens that a man holds down his position to keep the position, not to give the best that is in him. There is frequently a lack of vigilance and a general carelessness in the matter of records. The younger man looks forward to stepping into the older man's shoes and very often "skimps" his hours of duty to the limit.

All this could be changed if the physicians were paid a fair salary for the work that they did. It would not be so much a question then of the doctor seeing as many patients as possible in as short a time as he can, as it would be a question of taking the proper amount of time in order thoroughly to examine all those who come to him. It is only human for one to take more interest in what he is doing if he is properly reimbursed. A man who is doing this work realizes that frequently the time he is spending this way might be used to better advantage financially.

Second.—*Advantage to the Patient.*—It is very fortunate that the majority of patients that go to the clinic do not need more attention than is given them. The interesting case pays for itself, but the average case is uninteresting and is disposed of as quickly as possible. I believe that if the physicians were paid, certain demands could be made upon them to do their work thoroughly on every occasion. Not only would this be of advantage to the patient, but it would mean that the physician would learn more because of his thoroughness. In these circumstances the patient would be considered more of a human factor and be treated with less discourtesy than he is today.

In passing I feel it my duty to comment upon the number of patients who come to the free dispensaries and hospitals not because they wish charity, but because they cannot afford to pay the one or two dollars necessary to go to an office. These patients are often pauperized against their will, and many of them would be only too glad to pay a small sum for the attention given them if it were brought to their notice that such sum would be accepted. Patients who come once a week, in at least 50 per cent. of cases, could easily pay fifty cents to one dollar a visit. Such a sum could be set aside to be used to salary the physicians. This method would be of decided advantage to everybody.

Third.—*Advantage to the Dispensaries and Hospitals.*—In a large city like New York the public institutions are over-burdened with work, and the professional work is taken care of by a class of men who frequently attend to their duty in a haphazard manner. The institutions in which they work have no control over them, evidenced by the very few instances in which physicians are dismissed for inefficient service. I believe that if the physicians were paid for their work the hospitals could demand better service, and if any institution felt it necessary to dismiss a physician the vacancy could often be filled by some one better qualified if such physician could be properly remunerated. Institutions then could demand a higher standard. Although the majority of professional men look down upon the physician who works in commercial fields or on a salary, such as for an insurance company, nevertheless one must admit that such men do their work efficiently because they understand that if they do otherwise they will be relieved of their position. Payment for medical work in free institutions should be standardized.

In passing, I desire to bring attention to the large number of physicians who work among the poorer classes for very small fees. Such men are losing numbers of cases daily because these poorer patients go to the free dispensaries and hospitals. Many of these doctors work in these dispensaries and constantly have it brought to their attention that patients who come there could go to their offices and pay a small fee. If these patients feel that they get better attention in the free institutions there is no reason why they should not go there, but at the same time these institutions owe a duty to the physicians working among the lower classes, which duty consists mainly in seeing that they are properly reimbursed for what they do with a wholeheartedness and often against their better sense.

11 West 81st Street.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

DUNBAR ROY, A. B., M. D., F. A. C. S.
Atlanta, Ga.

I answer no.

First, because every physician and surgeon under present social and economic conditions is compelled to do a certain amount of charity practice. It matters not whether this is done in private or dispensary work. Practically all physicians do a certain amount of both. The hope of reward in the former cannot be compared to the latter if such is to be estimated by the material benefits to be derived from the two kinds of practice.

In the second place, while attending physicians are giving time and ability to such institutions indirectly they are being remunerated. This comes from the publicity given them in being connected with these hospitals and dispensaries. Most of the patients look upon these attending physicians as being men of unusual ability, as otherwise they would not be occupying these positions. Such estimation may be entirely erroneous and yet be effective. Many of these will also prefer to be treated privately, thus adding a little to the physician's meagre income. His name will be given to friends whose own physical ailments may at some time need the proper professional attention.

In the third place, these institutions are usually for the care of indigent people who cannot afford to pay a physician. Such may be endowed or may be operated through voluntary contributions from people who can do charity work only in this manner. All classes of citizens are called upon to make some contribution to charity. I believe that the physician's contribution should be his services. On the other hand, I do not think that monetary aid should also be expected, as the time and labor given by the physician to charity is far in excess of any other contribution and much more than is given by the individual of the same degree of financial wealth. This should be the physician's part and the public should not expect more. Unfortunately, too often the public expects the physician not only to give his professional services, but they are even surprised and comment upon the fact if the physician does not also make a monetary contribution.

In the fourth place, the large majority of physicians attending upon free hospitals and dispensaries are connected with some medical school and in this way the clinical material of such institutions can be used for the instruction of medical students. This aids the school with which the physician is connected and indirectly aids him in perfecting his own medical knowledge and in addition increases his reputation, through which he obtains more lucrative work.

For this reason and many others I think that both are benefitted and both are remunerated in proportion to the work that is accomplished.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

F. D. GRAY, M. D., F. A. C. S.,
Jersey City, N. J.

The question of whether or not attending hospital and dispensary physicians should be remunerated must be considered from two standpoints, and these concern the type of hospital involved.

First, the strictly municipal, county or State hospitals which are supported by public funds; second, the much more numerous hospitals which are dependent almost, if not entirely, upon self support; that is, voluntary contributions from individuals sympathizing with their purpose and the moneys received for the board and care of patients.

The statement has often been made that the hospital or dispensary is worth more to the attending physician or surgeon than he is worth to the hospital or dispensary, by virtue of the opportunity afforded for the medical or surgical experience obtained by the attendant and the greater or lesser prominence he acquires from the fact of being on the hospital or dispensary staff. There is no doubt considerable truth in the above statement, the proof of which lies in the fact that were any of the present members of such staffs to resign their positions the places could be immediately filled with men who stand ever ready to grasp at such opportunities, showing that the profession at large do really consider these institutional connections of sufficient value to compensate for the time and effort involved in holding them.

In my opinion the benefits derived accrue more especially to the attendants in dispensaries who are usually of the younger class of physicians needing any and every opportunity of introduction to the public, even among the poorer classes, for the purpose of securing and building up a practice. Again, among the so-called self-supporting hospitals, almost without exception, there are available rooms for the accommodation of the attendants' private patients, from whom the attendant can collect a fee, and this fact constitutes the remuneration for services rendered to other patients who are on the charitable list. Moreover, this type of hospital, from the very fact of being on a self-supporting basis, and in many if not the majority of instances laboring under a financial deficit, is doing a truly altruistic work with which the attendant should sympathize and willingly participate in.

On the other hand, the attending physician or surgeon in municipal, county or State hospital or dispensary is not performing an act of altruism or charity to the patients therein. The State, county and the municipality are under obligation to provide medical and surgical care for the indigent poor and the medical man who gives gratuitous services for these institutions performs no altruistic act for the individual whom he thus serves, but for the city, county or State, none of which is a proper object of altruism or charity, and all of which compensate every other person connected with such institutions. They pay the architect who draws up the original plans, the lawyer who may advise upon a legal situation, the contractor who erects the structure, the superintendent of the completed building, the supervisor of nurses and even the nurses in training, but the doctor goes without compensation except what he may derive as before stated from experience, and a certain amount of legitimate advertising.

Here, we believe, is the only present field in hospital work where the medical and surgical staffs may properly and should be paid a salary. There is no more reason why the physician or surgeon should render gratuitous services to the city, county or State than that members of the legal profession, architects and business men should do the same. True, the experience and the position count for something, often for much, but simply as a matter of justice to the medical profession as compared with other professions and other callings, the hospital should pay something for services rendered.

A correlated problem which is already facing us to an extent and undoubtedly will in the future become more and more a vital one is that of the compensation of internes. Up to a decade ago hospitals had no difficulty in securing competent internes. Within the past five years in particular the smaller number of graduates from medical schools, together with the fact that the increased term of preliminary and medical education leads many of the new graduates to feel the necessity of immediately entering upon private practice for pecuniary reasons, has made the question of obtaining desirable hospital internes a matter of increasing difficulty, and while it is equally, if not more, true of the younger practitioner than of the older ones that the hospital and dispensary furnish valuable experience, yet the question of paying at least a small salary to hospital internes serving in all classes of hospitals will probably arrive and become effective before it will practically affect the members of the regular hospital staff.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

KENNON DUNHAM, M. D.,
VISITING PHYSICIAN, CINCINNATI TUBERCULOSIS SANATORIUM.
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"Attending hospital and dispensary physicians" should be discharged. There is in my judgment a place in both hospital and dispensary for a non-paid consulting staff, but the men doing the work should be full time and well paid. The worst form of attending staff is the rotating staff. No one who has given this subject honest and unbiased consideration can fail to understand this. It will not be considered here.

All work must be remunerated. The members of the attending staff work primarily to perfect their knowledge and to improve their clientele.

Hospital and dispensaries should be operated for at least three purposes—to aid the sick, advance medical science and to teach the student.

The ideal of these objects can be more nearly approached by full time, well paid men who are connected with the teaching staff of a university.

Such an arrangement really saves money. The salaries could be paid from the funds resulting from organized and co-operative economies. A non-paid staff resents such interference from the superintendent's office.

Further, they cannot possibly do all in their power for the sick, do sufficient research to advance medical science, teach medical students to the students' best advantage, and serve their private patients so faithfully that they earn an honest living.

A staff paid for half time is better than a non-paid staff, but it illustrates the half loaf proverb.

If the non-paid staff were discharged and reappointed as consultants, and their suggestions and directions received careful consideration, but were not treated as

orders to be obeyed, then they would be useful in furthering the fundamental purposes for which hospitals and dispensaries are operated.

Thus a definite and intelligent policy suitable to each institution could be made out by the university or other head after due consultation and the superintendent and full time staff could be held accountable for its execution. Any one who is donating his services can not be so held.

The time of the consultants would be conserved, their experience would be of vast help and they in turn would examine a large number of well worked up cases which would pay them for their time.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

GEORGE F. BUTLER, M. D.,
MEDICAL DIRECTOR OF MUDLAVIA,
Kramer, Ind.

Of course, attending hospital and dispensary physicians should be remunerated, even in charity hospitals.

Every man should be paid for his services. If his services are valuable at all some one should pay for them, and even in the charity hospital which is supported by the State or city, skilful physicians should be paid for attending to the sick.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

T. D. CROTHERS, M. D.
Hartford, Conn.

The practice of the modern hospital and dispensary, calling for gratuitous services from the attending physician, is stupid medievalism. In no other profession or business circle are the demands for public charity so unreasonable. The specious reasoning that these services compensate the physician through the training for better work is contradicted by experience.

It is a reflection on the value at which he estimates his services to give them without compensation, and permits the assumption that hospital and dispensary practice brings him a species of training of which he is in need.

Hospitals, like all other business enterprises, can be successful only when managed by suitably trained and paid officers, and why should the physician, on whom the success of the hospital depends, pauperize himself in the effort to diminish the pauperism of others?

Private and personal charity appeals to everyone and is a part of every physician's life, but public charity should not be imposed upon the physician, any more than on the lawyer or any other professional or business man.

Every hospital and dispensary to secure the best services must pay the physician the same as every other person connected with its management. It is not an exact pecuniary question. It is a recognition of skill and an expression of respect for his services. This should extend down to the interne, who is entitled to the same consideration and respect as the poorest paid menial.

John Doe began as an interne and worked up to visiting physician and for forty years he spent several hours every day walking the wards of the hospital, without any returns. He finally died, a poor man, unrecognized and unappreciated except in a narrow circle. Had he given half that time to a private practice and been only moderately rewarded, he would have done more for humanity and lived a richer and better life.

The public should be made to understand that the physician of all others should be remunerated for his public services. Anything less than this is degrading and pauperizing both directly and indirectly.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

EDWARD H. MARSH, M. D.,
Brooklyn, N. Y.

This is a question the answer to which largely depends upon the institution and the department affected. As a general principle, I am of the opinion that it would increase the efficiency of a department to pay the assistants a small salary.

The head of the department should serve without pay, for the consultations which come to him as a direct result of his connection with the institution will usually compensate him fully for the time which he devotes to that institution. Furthermore, as a rule he is a man of ability who has a practice sufficiently remunerative for him to devote some of his time to hospital or dispensary service without taking the risk of losing any of his private practice.

Assistants should be remunerated, because they can less easily spare the time to attend regularly; they get no consultation work, at least for several years, and their work is usually the most uninteresting routine work of a service. By paying an assistant a small salary he can be held more strictly accountable for regular attendance, better histories will result and eventually he will be better prepared to do more important work.

448 Ninth Street.

SHOULD ATTENDING HOSPITAL AND DISPENSARY PHYSICIANS BE REMUNERATED?

ROBERT T. MORRIS, M. D.,
PROFESSOR OF SURGERY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL,
New York.

Concerning the direct question "Should attending hospital and dispensary physicians be remunerated?" Indeed, they should be remunerated. The fact that they are willing to work for the sake of the experience without pay does not mean that their services are not invaluable to the public. In some countries these physicians are paid for their services. As a matter of fact, however, the endowments of few hospitals suffice for paying even the ordinary running expenses. As we progress in civilization the State will take charge more and more of a subject which concerns it so intimately.

616 Madison Ave.

Findlay and Robertson conclude:

1. Salvarsan is superior to mercury in alleviating many of the manifestations of congenital syphilis.

2. Salvarsan should be administered to infants and young children intravenously.

3. It is advisable to use concentrated solutions of the drug and the veins of the scalp as the seat of the operation in order to avoid the necessity of an anesthetic.

4. Antenatal treatment is more successful with salvarsan than with mercury.—(*Quart. Jour. Med.*, Jan., 1915.)

General Scientific

A NEW OPERATION FOR THE RELIEF OF PRURITUS ANI.*

IVOR BACK, M.A., M.B., B.C., F.R.C.S.
SENIOR ASSISTANT SURGEON TO ST. GEORGE'S HOSPITAL, AND TO THE GROSVENOR HOSPITAL FOR WOMEN, ETC.
London.

Pruritus ani is commonly regarded as falling into three classes, namely:

1. In which it is associated with general disturbances of metabolism, such as gout, diabetes, etc.;
2. In which it is associated with other local rectal conditions such as hemorrhoids, fistula, fissure, etc.;
3. In which no other cause, local or general, can be found.

Personally, I doubt whether the first class is a real one. I do not mean to deny that a gouty subject may have pruritus ani; but I have found that when the physician has expended his wiles upon him, and the gout or other metabolic disturbance is at length pronounced as being under control, the pruritus remains. I therefore regard the association as accidental; the pruritus exists with the gouty tendency, not because of the gouty tendency. If I am correct, the first class falls automatically into the third.

The second class in which the pruritus is associated with other rectal conditions such as hemorrhoids, fistula, fissure, etc., is a very genuine one, and may cause trouble to the practitioner, who treats the pruritus with ointments without examining the rectum for the presence of a local lesion. If such be present, palliative treatment is certain to be a failure, to the disappointment of the patient and the discredit of the practitioner. Hemorrhoids, fistula, or fissure may cause pruritus, and in this case nothing will cure the pruritus, as long as the primary lesion is allowed to persist. The late Sir Frederick Wallis was of opinion that the commonest cause of pruritus ani was a small ulcer on the mucous membrane at the ano-rectal junction, or at the base of an enlarged papilla. I *have* seen such a condition associated with pruritus, but I am not satisfied, as he was, that it is a *common* local cause.

Be that as it may, the treatment of this second class of case is easily summed up. The primary focus in the anal canal, whatever it may be, must first be cured, and if this is successfully effected, the pruritus will generally disappear.

The difficult cases to deal with are those of the third class, in which the pruritus is the only symptom and rectal examination reveals no local cause of any sort. In these cases, the anal orifice presents a typical picture to the experienced eye. The normal folds of the pigmented perianal skin are thickened, as if by a very chronic edema, and paler than in the normal individual, a light dove color, while the rugae between the folds are deepened. If the pruritus has been recently acute, the skin may be exciorated where the patient has scratched himself during sleep; but in quieter periods, the skin outside the pigmented area is absolutely normal.

It is my belief that the condition, like pruritus in some other parts of the body, is due to a local inco-ordination of vaso-motor control, probably in the direction of chronic vaso-dilatation. This would account at any rate for the hypertrophied condition of the perianal tissues.

The operation which I am about to describe to a modification of Sir Charles Ball's operation, which consists of making two crescentic incisions round the anus enclosing the entire ellipse, with the exception of a narrow neck in front and behind. The flaps of skin so marked out are raised, and carefully dissected up as far as the muco-cutaneous junction. The flaps are replaced and retained by sutures. The whole idea of the operation is to cut the superficial sensory nerves supplying the part, and so to render the area anesthetic.

My experience of this operation is that it cures in about 60 per cent. of cases. Now, it can be demonstrated beyond contradiction that the superfiicial nerves are cut. If, therefore, the hypothesis that the pruritus is due to an abnormal condition of these superficial nerves is correct, the percentage of cures should be higher.

I therefore began to make a systematic examination of the cases after this operation by testing the sensibility of the area inside the incisons (1) to a light touch with cotton wool (epicritic), and (2) to a pinprick (protopathic). The results were so anomalous, that I began to doubt the correctness of the superficial nerve theory.

Of the first 20 cases I thus examined, 12 were cured. None of the dozen, tested two months after the operation, had any perceptible diminution of perianal sensation, protopathic or epicritic. Of the remaining eight, who were unrelieved, two after the same interval of time had complete perianal esthesia. I noticed one other curious thing. In spite of the greatest care taken in tying vessels during the performance of Sir Charles Ball's operation, a hematoma, of greater or lesser degree, does fairly often supervene. In all the 12 cases of cure, some degree of hematoma had been observed, but in only two of the eight unsuccessful cases.

I came to two conclusions: (1) that the pruritus was not connected with the condition of the sensory nerves of the part; and (2) that the operation, when it succeeded, did so by interfering with the vascular, and not the nervous, mechanism of the anal region.

Now the anal region is supplied with blood by the inferior hemorrhoidal artery, and the tone of this artery, *i. e.*, its condition of construction or dilatation, is controlled by the small branches from the sympathetic system which travel with it. It occurred to me, that if I wilfully cut and ligatured the artery, I should, at the same time, divide the nerve which controlled it, and thus relieve the vaso-motor inco-ordination of the part.

I, therefore, make the same incision on each side of the anus, as in Sir Charles Ball's operation, but instead of dissecting up a flap I cut frankly down into the tissues of the ischio-rectal fossa, until I meet and divide the inferior hemorrhoidal artery. The artery is small and cannot be dissected out, but it is easy to cut across it, and its spouting ends are then readily recognized and ligatured. One point in technique I regard as important; I unite the cut edges with Michel's clips. These do not pierce the skin, as sutures do, and make no track for a possible subcutaneous infection. I remove the clips on the fourth day, by which time the wound is healed. I do not give a purge until the clips have been removed to minimize the risk of infection of the wound.

I have been doing this operation for more than a year, but I have not been able to collect a sufficient number of cases to form reliable statistics. In my first dozen cases, I did not have a failure, so that I am led to believe that my theory is correct.

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STRICTURE OF THE URETHRA.

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Case I. Neglected Stricture of the Urethra, Two Previous Operations, No Sounds Passed and Recontraction of Stricture. Treated by Third Operation.

The first patient that I have to show you this afternoon is a man about 45 years of age. He has been complaining for a long time of inability to pass his urine, except in small amounts, and with severe pain. He came into the hospital with complete retention and his bladder was distended away up to the umbilicus. As you see, this man is rather young for a prostate ic. but there are various things to consider as to what the retention is caused by. The most likely condition in a case of this sort is a stricture and on coming to get his personal history we found that he had had several attacks of gonorrhea. About ten years ago he was operated on for a stricture. After the operation he neglected to have sounds passed and went away from the hospital. Two years after that he had another attack of retention of urine and went to a hospital and had a second operation done. He learned a little from his experience at that time, for after the second operation he passed a bougie on himself for six months and then he stopped.

Now that shows that cutting a stricture does not cure it. By cutting a stricture all that we are able to do is to enlarge the calibre of the urethra and divide the stricture band and afterwards we have to depend upon the passage of sounds during the rest of the patient's life. Eternal vigilance is said to be the price of liberty and eternal vigilance is required to maintain the urethra at its normal calibre.

When this man came into the hospital with his bladder distended to the umbilicus, with the past history of having had two operations of external urethrotomy, we assumed that the stricture had shut down again, and on exploration of the urethra with a sound we found that the sound met with an obstruction and we were not able to introduce the smallest sized sound or catheter into the bladder. We then attempted to get into the bladder by means of a filiform guide—a small, fine whalebone guide. We attempted to pass that into the urethra because if the stricture is very small in its calibre we are able to introduce one of these very fine instruments and slip it through and we have established a canal to the bladder and we can pass a tunneled sound or tunneled catheter over that and draw off the water, but in this case the opening of the stricture was evidently off to one side, because all the attempts to pass a guide were unsuccessful. We had then this condition to deal with—distended bladder, great suffering, great pain and inability to get any instrument through the urethra to relieve the distended bladder. Our only recourse, then, was suprapubic aspiration, which was done by Dr. Raycroft and Dr. Davison. This was accomplished by making an incision through the skin just over the pubis and plunging a large trocar and caula down into the bladder and drawing off the water. In that way the bladder was emptied. This is a very simple and slight operation, which can be done very readily with a distended bladder and without injuring the fold of the peritoneum, which lies in front of the bladder. We were able to give the man temporary relief, but the relief was only temporary because the bladder filled up again and we were still unable to pass any instrument through the urethra.

Now, for the purpose of disposing of this stricture, we are going to do an external urethrotomy.

Before doing the operation, I am going to try to pass a guide on this man, because it makes the operation very much easier to do if I have a whalebone guide running into the bladder than if I have to cut down on the urethra and search for the bladder. To facilitate my manipulations we will first fill the urethra with sweet oil, and with a little manipulation I am able to pass the guide into the bladder. The reason we were not able to pass a guide before was because the anesthetic has evidently relaxed the spasm, so that I have an advantage which the men who were working on the case before did not have.

Operation.

Urethra opened in perineum. Proximal end of guide drawn out through wound and Rand's tunnelled knife threaded over it and pushed into the bladder, dividing stricture bands on floor.

Gorget introduced and bands freely divided with blunt bistoury.

Interior stricture divided by internal urethrotomy. Perineal urethra partly closed by suture, perineal drainage tube introduced into bladder.

Now, what have we accomplished? We have cut through the stricture and divided it on the floor so that instead of there being a little opening in the canal which you can hardly get through, there is a good big, free opening through which a full-sized sound can be passed, and we have drained the bladder and stopped the bleeding.

The after-treatment of the case will consist in leaving the tube in for from four days to a week or so and then taking it out, but this man must use sounds in order to keep the canal open as long as he lives.

Case II. Traumatic Stricture, Several Previous Operations, Neglect, of Passage of Sounds, Recontraction. Treated by Continuous Dilatation.

I have another case of stricture which I want to show you and say a few words about.

This lad here, 16 years of age, when he was 9 years old was trying to jump over a milk can, but instead of that he jumped into the milk can with one leg and ruptured his urethra sustaining a traumatic stricture. A traumatic stricture, is caused by jamming the urethra up against the anterior layer of the triangular or subpubic ligament and the urethra gives at that point, being torn right across.

These traumatic strictures are very dense and inelastic. The boy has been operated on a great many times, the first time at St. Mary's Hospital, where they have a very competent surgical staff. His first operation was in the perineum, for the purpose of making an artificial opening for drainage of the bladder. The wound closed up, but he had the stricture left and experienced difficulty in passing his water. Since the accident he has had eight different operations for the stricture which followed his injury. The last operation was done four years ago, and for one year following the last operation a sound was passed every week. In July he consulted a physician because of the increasing difficulty of urination and smallness of the stream. He came to us in September, and was able to pass but a very small stream of urine.

On examination we found a considerable amount of scar tissue and could get nothing in but a small filiform guide. The second attempt to pass a filiform guide was unsuccessful, and on another day the filiform

guide was passed and tunneled sounds were passed over the filiform guide in hopes of enlarging the calibre of the stricture, but the stricture was so dense and so elastic that the tunneled sounds would not answer the purpose. It would spring back and recontact. After having treated him in that way for a month, we gave up the attempt to treat the case with tunneled sounds, but we wanted to see what else we could do.

Now, I will show you the condition that we had to deal with. His perineum is a mass of scar tissue from the eight previous operations. When I looked at it I said, "If we cut that boy again—do a perineal urethrotomy on him again—the chances are that we will leave him with a fistula and have a fistulous tract, because the tissues are so thin and there is so much scar tissue present that I am afraid we won't be able to get good sound union." We then had to exclude treatment by gradual dilatation. Operation promised very little and the outlook for operative success was very doubtful; so then I said, "There is one other thing we can try, and that is to treat the case by continuous dilatation." By that we mean the passing of a small instrument, like a filiform guide, through the urethra into the bladder, and leaving it in there for twenty-four hours. The stricture widens around the guide and after twenty-four hours the guide can be withdrawn and a little larger instrument introduced. After twenty-four hours the stricture widens a little more and this instrument may be taken out and a still larger one introduced, and in that way we can dilate the stricture slowly and gradually. We began with a filiform guide and left it in twenty-four hours, took it out and then used flexible bulbous bougies. We used the smallest size that we could take. We left it in place for twenty-four hours, at the end of which time it was taken out, and we were then able to introduce the next largest size. In twenty-four hours we took that out and were able to introduce a still larger one. After a period of twenty-four hours we were able to dilate him up to about 18, but for the stricture to widen it took probably forty-eight or seventy-two hours, so we had to let the bougie lie longer in place. He is now wearing a No. 24; so in about ten days' time we had succeeded in getting the dilatation up to 24. We began on October 9th with a No. 12 bougie (small size) and today is Oct. 21st and we have it up to 24. He says he is now able to stand 26. That shows, in the first place, the sort of case that continuous dilatation is adapted to and, secondly, the results of continuous dilatation. You may say, "Why, doesn't that plug the urethra up?" It does not. The water flows out alongside, so he is able to pass his water quite freely alongside of it. Continuous dilatation is an old plan of treatment. It antedates cutting of the stricture by many years. It has its own particular place. It is useful to know about it because once in a while it is going to help us out of a difficulty such as we were in in this case.

Retention of Urine—General Remarks.

The case which I have just operated on brings out some of the points in connection with the subject of retention of urine and while we are waiting for the next case to be etherized I would like to take up the subject somewhat in detail.

Retention of urine may be defined as the filling of the bladder with urine which the patient is unable to void, and it must be differentiated from suppression of urine, in which the kidneys fail to secrete any urine at all, and rupture of the bladder, which permits the urine to escape into the belly. The conditions are easy to differentiate. In suppression of urine from failure of the kidneys to secrete urine, percussion over the bladder shows it to be empty, and the catheter is introduced with ease, but draws no water, showing that the bladder contains no urine. Rupture of the bladder, in very rare instances, occurs from a chronic, slow form of ulceration which thins the bladder wall, and contraction of the bladder muscle may cause a rupture. In most of the cases, however, the patient gives a history of falling upon his abdomen with a full bladder. The catheter is introduced and little or no urine returns. A measured quantity of water is then introduced into the bladder through a catheter with a syringe, but the full amount does not return, some of it escaping into the peritoneal cavity. In this way it is very easy to differentiate the above conditions from retention of urine, in which the bladder is found, by percussion and palpation, extending sometimes as high as the umbilicus as a round, fluctuating tumor in the epigastric region.

The causes of retention of urine are, first, stricture, which may be spasmodic or organic; secondly, enlargement of the prostate, due either to senile hypertrophy or gonorrheal inflammation; third, a foreign body impacted in the urethra, such as a calculus formed in the bladder and passed out, or a foreign body introduced into the urethra from without for the purposes of masturbation; fourth, paralysis of the bladder occurring in typhoid and other continuous fevers, or from myelitis, hemiplegia or other nervous affections.

In examining a case of retention of urine palpation over the bladder region gives a round, smooth, fluctuating tumor with a flat note on percussion. We should next examine the rectum to determine the size and consistency of the prostate, and then the urethra should be explored with a steel sound. If the retention is due to a spasmodic contraction of the cut-off muscle a large sized sound will generally overcome the spasm and enter the bladder. If the stricture is organic in character the sound will be arrested, and in a very tight organic stricture in order to enter the bladder, a filiform guide may be required.

Now, as to the treatment of these cases: A spasmodic stricture or, oftentimes, retention due to an organic stricture will respond to a full dose of morphia hypodermically and a hot sitz bath prolonged for a half an hour, but the main dependence in cases of retention is the catheter. In the cases where a catheter cannot be passed we can usually succeed in introducing a filiform whalebone guide. The passage of a filiform guide is facilitated by filling the urethra with adrenalin solution which shrinks the stricture and allows the guide to pass, and then the urethra should be distended by injecting it with sweet oil to lubricate and distend the opening of the stricture. The filiform guide having entered the bladder, a Gouley's tunneled catheter can be slipped over it and the retention relieved. After the bladder has been emptied the filiform guide is still left in place and the physician must decide whether to employ so-called dilatation or proceed to immediate operation. If a surgeon with experience can be secured, a stricture which is so tight that it will only admit a filiform guide is best treated by the operation of urethrotomy; but if the patient does not consent to operation or the patient is situated some distance remote from a surgeon, continuous dilatation will generally enlarge the stricture so that it can be subsequently treated with sounds.

In those distressing cases where even a filiform guide

cannot be passed through the stricture and the patient is suffering the tortures of a distended bladder, crying for immediate relief, there is one procedure which can be employed by a man without the necessary surgical training for doing a urethrotomy, and that is aspiration above the pubis. A small trocar in a canula can be plunged through the belly wall, taking care to come close to the pubic bone. In this way the bladder can be opened through the space of Retzius and below the peritoneum, the bladder relieved and the urine drawn off through the canula. Of course, the preferable plan is the relief of the stricture by means of a perineal section, but I am mentioning these other methods because the services of a surgeon are not always immediately obtainable.

In the cases of retention due to enlargement of the prostate in catheterizing a patient with gonorrheal prostatitis, the urethra should first be well washed out to lessen the chances of infecting the bladder. In dealing with a senile hypertrophied prostate, it is better not to waste time by temporizing with baths, morphia, etc., but proceed at once to the introduction of a catheter.

I have already cautioned you against the dangers of emptying a full bladder at one sitting. Many an old man has been sent to his death bed by the injudicious zeal of the man behind the catheter. The sudden relief of the back pressure when a long-distended bladder has been emptied suddenly is very apt to throw the kidneys into a state of acute congestion wth consequent urosepsis and death from suppression of urine.

In the case of a foreign body impacted in the urethra it may sometimes be extracted by long urethral forceps, but it generally calls for some kind of operation. If the foreign body is lodged in the deep urethra it is best approached by perineal section. If a calculus lies in the bladder and has an angle projecting into the urethra it is more easily removed by suprapubic incision, and when the foreign body is impacted in the pendulous urethra it is better to cut down upon it directly and remove the foreign body and suture the wound.

32 Schermerhorn St.

Diagnosis of Tuberculosis in Early Life.

H. R. M. Landis and I. Kaufmann say that in the diagnosis of tuberculosis in early life the symptomatology is of less value than in adults because they are unable to describe their symptoms. Little reliance can be placed on slight elevations of temperature, because growing children normally have higher temperatures than adults. In children all sounds are normally exaggerated and physical signs are often altered by faulty position or incorrect breathing. In children variations in respiratory excursion are not as significant as in adults. In considering the diagnostic value of enlarged lymph nodes it must be remembered that all children have easily palpable nodes. A positive von Pirquet reaction before two years of age usually means clinical tuberculosis. The chief facts to be decided in regard to a child are whether it is physiologically normal, and if not what is the cause. Whatever the latter may be we should endeavor to correct the child's surroundings and mode of life.—(*Am. Jour. Med. Sci.*, p. 530, 1914.)

Septic cystitis is characterized by pyuria, with great increase in the mucous secretion; also by pain, local and reflex, frequent micturition, and when the reaction is alkaline, the blood coloring matter is well suspended in the urine, not readily forming a deposit. Pyogenic organisms are abundant in the urine.

INTUSSUSCEPTION: SPINA BIFIDA.

From the Surgical Clinic of

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History: Boy, nine months old, sent to the hospital because of sudden severe abdominal pain, continuous vomiting and bloody stools.

The child has been in perfect health up to twenty-four hours ago when it began to cry as if in acute pain—the spasms of pain seemed to increase in frequency and duration. Following the pain the child vomited several times and passed two stools composed of a small amount of fecal matter mixed with mucous and blood.

On admission temperature 101—a mass is felt in the left lower quadrant and rectal examination is negative.

Nothing has been given the child but an injection, which was expelled without results.

Remarks: The symptoms in this case are very suggestive—a previously healthy child suddenly gives expressions of severe pain accompanied by vomiting, bloody stools and an abdominal mass. It would be difficult in the presence of these findings to think of anything but intussusception.

Intussusception is essentially a disease of infancy, three-fourths of the cases being under two years of age.

Intussusception may occur in any part of the intestine, but in children the ileocecal region is the most frequent site. The anatomical reason for this is evident when it is recalled that the normal ileocecal junction is really in the form of an invagination.

The usual form of intussusception is that in which the ileum with the cecum is prolapsed into the colon,

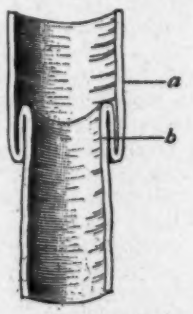

Fig. 1.—INTUSSUSCEPTION IN VERTICAL SECTION.
a, Intussuscipiens; b, Intussusceptum.

the ileocecal valve forming the apex of the protrusion. This form of intussusception may be so extensive that the ileocecal valve may reach the rectum and protrude through the anus.

Note the mechanics of an intussusception in a vertical section (Fig. 1). It consists of three layers of bowel. The two inner layers—the intussusceptum—belong to the prolapsed portion; the outer layer—the intussuscipiens—the receiving portion.

Again, the two prolapsed layers have their peritoneal surfaces in contact; hence the probability of their becoming adherent. The receiving portion and the prolapsed portion have their mucous surfaces in contact.

It must be obvious that mechanical intussusception of itself does not produce intestinal obstruction, the obstruction is due to the subsequent swelling of the parts and the accumulation of feces.

Again, the prolapsed bowel carries along its vascular

pedicle—the mesentery—hence, circulatory disturbances arise—venous congestion, giving rise to bleeding within the bowel; and arterial constriction, producing gangrene of the prolapsed bowel, which may slough off, and spontaneous cure result, provided adhesions have previously been formed at the neck of the intussusception.

Operation: In very early cases bloodless reduction may be tried by giving the patient a light ether narcosis to relax the abdominal wall and then endeavoring to reduce the invaginated intestine by distention with water. Saline at body temperature is introduced per rectum by means of a soft rubber catheter and a funnel held about three feet above the patient. The pelvis is elevated and the glutei pressed closely together to prevent the return of the fluid. With the abdomen relaxed by narcosis any changes in the tumor are easily recognized by means of palpation. If successful the patient is given a dose of opium to prevent the invagination from returning. This method of reduction has the same relation to intussusception as taxis has to strangulated hernia. It also has the same limitations and I do not advise using it in cases of over twenty-four hours duration. I do not feel that this case is one for bloodless reduction—we shall therefore resort to open operation.

I shall make a median abdominal incision extending from the umbilicus to the pubis. As the abdomen is open note the presence of a quantity of serous fluid. I find the mass of invaginated intestine in the neighborhood of the sigmoid. As is usual the ileum has been invaginated through the ileocecal valve, and traverses the cecum, ascending, transverse, and descending colon. I shall endeavor to push rather than pull the ileum out. There seems to be no adhesions and the ileum is disinvaginated without difficulty. The patient has suffered little shock and should make an excellent recovery.

Comment: Note carefully that *obstruction is not an early symptom of intussusception*—obstruction is secondary. Hence, the child at first expels gas and fecal material—but note the special character of the material that is passed by the bowel—it is fecal matter in small quantities mixed with mucous and blood.

Bloody stools are characteristic of intussusception.

The blood passed by rectum is usually in small quantities, but cases are reported in which the hemorrhage was so profuse that death ensued.

As time goes on the patient unrelieved passes into a state of collapse; constipation becomes absolute, and the abdomen becomes tympanitic.

Examination of Abdomen: If the abdomen be palpated early and gently it is usually possible to detect at some point of the abdomen—most frequently the right or left iliac fossæ, a round or sausage-shaped mass, which can be moved transversely. As the invagination progresses the tumor increases in volume. It is evident that in ileocecal invagination the tumor follows the course of the large intestine and may finally reach the left iliac fossa and the rectum.

Examination of Recum: *In all cases of intestinal obstruction in children never fail to make a rectal examination.* This is of special value in intussusception. The bloody mucous which soils the examining finger is in itself significant, while if the invaginated intestine reaches the rectum the finger will come in contact with a soft rounded tumor, which is distinguished from a rectal polypus by its greater volume and the fact that it has no point of attachment to the rectal wall. If the invaginated mass protrudes through the rectum it is distinguished from a prolapsus ani by its dark color and absence of pedicle. Where spontaneous cure occurs, which is rare, a fetid diarrhœa marks the expulsion of the sloughing intussusceptum.

Diagnosis: The diagnosis should not be difficult if we keep in mind the cardinal symptoms—sudden onset of violent intermittent pain, vomiting, bloody stools, and abdominal mass; and the additional fact that intussusception is the most frequent cause of intestinal obstruction in very young children (under age of two).

Remember, that the fate of the patient depends upon early diagnosis, for the results of operation are good only when the operation is done early. Furthermore, it is not possible from the symptom-complex to get an adequate idea of the severity of the anatomical changes and the only rational remedy is immediate exposure of the invaginated parts. Finally, the attending physician should ever keep in mind the fundamental rule—*never prescribe a cathartic in any acute abdominal condition*—only damage is done in intestinal obstruction by prescribing cathartics. *A purge is a deadly measure in intussusception.*

And again, never prescribe opium until the diagnosis has been made and preparation for operation is begun.

Spina Bifida.

Patient, boy, three weeks old, is brought to the hospital because of a tumor-like mass situated in the lumbosacral region and present since birth.

Examination shows that the tension of the tumor varies with posture, and that its volume increases when the child cries. Pressure over the tumor causes swelling of the fontanelles, and when compression is made

Fig. II—Spina Bifida.

at its base a bony defect in the vertebral arches is easily demonstrated.

There is no paraplegia, incontinence of urine or feces present.

Remarks: From the preceding history the presence of a spina bifida is unmistakable.

A spina bifida, as you will recall, is really a hernia—a hernia-like protrusion of the contents of the spinal canal through a congenital defect of one or more of the vertebral arches. The hernia is formed by some of the spinal membranes, and contains cerebrospinal fluid with or without cord or nerve-roots (Fig. II).

It is essentially a congenital bony defect of the spinal canal and is frequently associated with other deformities, such as club-foot, cleft palate, etc.

While this defect may occupy any portion of the spinal canal, it is most frequently situated in the lumbosacral region, rarely in the cervical, exceptionally in the dorsal region. In very rare instances the bony defect is situated anteriorly and there is a forward intrapelvic protrusion of the contents of the spinal canal. These latter cases are rarely diagnosed except in the course of abdominal operations.

The tumor-like mass presents a variable volume, usually not exceeding the size of an orange or tomato. The skin covering is thin, of a cicatricial aspect and often umbilicated. It is sometimes the site of nevoid stains or of an ulcerated area through which oozes cerebrospinal fluid. The skin at the periphery of the tumor becomes thicker and is often encircled by a collarette of hair. The sac of the hernial protrusion is formed from the arachnoid membrane, since the dura mater participates in the bony defect. The contents of the sac consists of cerebrospinal fluid with or without cord or nerve roots.

It is well to note that spina bifida is frequently associated with hydrocephalus, which suggests a fundamental disturbance of the cerebrospinal circulation as the causative factor in these developmental defects.

Operation: While the child is under light ether narcosis, and with the very essential precaution to have the head low so as to anticipate sudden loss of cerebrospinal fluid, we make eliptical incisions through the skin at the base of the tumor so as to excise the central portion. We next carefully separate the sac down to the pedicle. The sac is now opened and the contents observed. Luckily there are no nerve roots in the sac. The sac is now ligated and excised, treating it as you observe just as we dispose of the sac of an ordinary hernia.

The defect is closed by covering it over with fascial flaps and the skin sutured separately.

Comment: The diagnosis of these cases is extremely simple when we keep in mind the congenital origin, the position, and the variable tension of the tumor.

It is well to remember that the prognosis is grave.

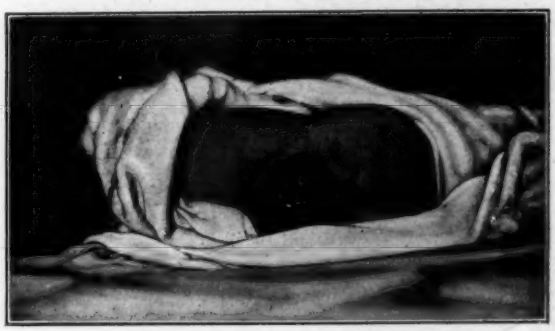

Fig. III—Ulcerating Spina Bifida.

Life is constantly threatened through ulceration of the protecting skin, and infection of the meninges, or rupture of the sac and urinary or fecal sepsis. Cases not operated soon present an ulcerating mass which speedily leads to a fatal result (Fig. III).

The majority of cases die early, those that survive are the meningoceles which contain cerebrospinal fluid only, and are therefore amenable to operative treatment.

Operation should be advised unless it is contraindicated by extensive paralysis or hydrocephalus—remember operation will not relieve paralysis.

Frankly explain to the parents that the gravity of the condition warrants the risk of operation and that the result may be fatal. The success of the operation depends upon the character of the tumor, the vitality of the child, and the simplicity of the procedure.

In those cases where operation is contraindicated the only resource is to protect the tumor from injury by a suitable shield of leather or celluloid held by adhesive straps.

394 Clinton Avenue.

TWO CASES OF HEMOLYTIC JAUNDICE.*

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In the last fifteen years considerable progress has been made in differentiating those chronic conditions which are characterized by the presence of a large spleen and an anemia of the secondary type.** There is still some confusion concerning the identity of some of the types, as they are inclined to merge into each other through border-land cases which may as yet not be definitely classified. Furthermore, certain fairly well marked types are, after all, probably merely clinical syndromes rather than distinct diseases, and may be brought into existence by any one of a number of factors—perhaps acting in the same way.

Such a syndrome is hemolytic jaundice, a type separated from the larger group mainly through the work of Hayem, Widal, Minkowski and Chauffard.

In 1898 Hayem described a series of cases characterized by chronic acholuric jaundice, anemia and enlarged spleen. In these patients there was an absence of the ordinary symptoms of obstructive jaundice, such as clay-colored stools, bile in the urine, bradycardia, itching, etc., although he stated that they were subject to acute exacerbations of jaundice, with abdominal pain and fever, and bile in the urine. Widal considers these attacks "crises of deglobulization." Thayer and Morris, however, suggest that they may be actual attacks of biliary colic, due to the presence of small pigment stones in the gall bladder, "such as have been found in four of the six cases of congenital jaundice that have come to autopsy." It seems probable that while such attacks of colic may occur, other acute exacerbations are in reality due to increased hemolysis.

In 1900 Minkowski reported a similar condition which was hereditary in type. He showed that these cases present an increased amount of urobilin in the urine. The hereditary form of hemolytic jaundice appears to be a much milder affection than the acquired form and presents several other slight differences.

Chauffard, in 1907, more sharply outlined the syndrome by showing that the blood of these cases show a decreased resistance to the hemolyzing action of hypotonic salt solutions. This is the opposite of the condition ordinarily found in other anemias and in obstructive forms of jaundice. The blood is tested after the manner of Ribierre, by placing a drop of blood in each one of a series of solutions of NaCl, varying in strength from .6 per cent. to .25 per cent. After two hours at room temperature they are observed to note the point at which hemolysis has begun and the point at which it is complete. In normal blood hemolyss begins

*Read before the Brooklyn Society of Internal Medicine, Oct. 22, 1915.

**Krumbhaar, in the *American Journal of the Medical Sciences*, Aug. 1915, presents a very complete review of this subject. The short historical sketch of hemolytic jaundice included here is largely based on his paper, which covers the essential contributions to our knowledge of the subject, and to which the reader is referred for a very satisfactory bibliography.

at .42-.44 per cent. and is complete at .32 per cent. (Thayer and Morris). Hemolysis has been seen to begin at .5, .6 and as high as .7 per cent in cases of hemolytic jaundice. The washed corpuscles are said to show a greater degree of fragility in the acquired type than do the unwashed corpuscles, while this is not true of the familial type.

In the same year Chauffard discovered that the blood in this condition, stained by the vital method, shows a great increase in the proportion of reticulated erythrocytes. The normal percentage is from .5 to 1.8, according to Vaughn, who was the first in this country to study this method of staining. In hemolytic jaundice the percentage is usually 10 to 20 and sometimes higher, being considerably higher than in most other anemias of like severity. It is considered evidence of greatly increased blood formation. This is also shown by the occasional presence of myelocytes and normoblasts.

A peculiar finding usually present in the blood of patients with acquired hemolytic jaundice is the so-called auto agglutination of Widal, Abrami and Brulé. The red cells, after having been separated from the serum by centrifugalization, are again added to the serum in a watch glass. After a few minutes they are seen to be gathering in little clumps at the bottom. In the case of normal blood, if the glass is gently shaken, the corpuscles are readily diffused throughout the fluid, while with a positive test, the mass at the bottom remains undisturbed by the shaking. Widal and his coworkers found this test always positive in the case of acquired type and always negative in the hereditary, but a number of exceptions have been noted.

As to etiology, hemolytic jaundice of the hereditary type is believed by Chauffard to be frequently due to syphilis or tuberculosis. He reports a series of cases in which the symptoms were markedly aggravated temporarily by the administration of salvarsan. This phenomenon he considered equivalent to a Herxheimer reaction. In other patients similar reactions were induced by the subcutaneous administration of tuberculin.

On the other hand, the acquired type is believed by many to be due to a number of different agents. Thayer and Morris state that it has followed shock and abortion, or has occurred with malaria, syphilis, cancer, etc., although frequently it seems to arise independently. Brulé, whom they quote, divides cases into primary, arising without apparent cause, or during the course of some transient malady and persisting indefinitely, and secondary, observed in a transient manner associated with acute infections or poisons, or as a terminal phenomenon in the course of a chronic disease.

The first case reported corresponds closely to the familial type, although there is no hereditary history. No causative factor could be determined.

Case I. M. K., twelve years of age, born in the United States. She was admitted to the Kings County Hospital August 16, 1915, complaining of jaundice.

Family History.—Father and mother living and well. Sixteen years ago the mother had an attack of jaundice without pain, lasting several weeks. At present she has no jaundice and her spleen is not palpable. A brother and sister are living and well and have never been jaundiced.

Previous History.—Whooping cough as a small child. Otherwise always well. Has never menstruated.

Present Illness.—About four years ago it was noticed that she was beginning to look yellow. Ever since that time she has been more or less jaundiced. She has had indefinite attaeks of abdominal pain which would disappear if she sat quiet. After these attacks her jaundice would be slightly worse. She has had an occasional nose-bleed, but this has not been more noticeable than in the case of the average child. Her appetite is good, she complains of no indigestion and her bowels are regular.

She spent a few weeks in May, 1914, in the Children's Ward of the Kings County Hospital. At that time she showed jaundice and a palpable spleen. Her Wassermann was negative. She had no fever and no pain. Her hemoglobin was 80-90 per cent, R. B. C. 4,200-000-4,790,000, W. B. C. 17,600-21,600, the polys. not exceeding 72 per cent. The leukocytosis suggests an infectious origin of her trouble. From that time until her present admission she has complained only of the jaundice and occasional attacks of abdominal pain.

Physical Examination.—The patient is a small-boned, rather poorly-nourished child. Sclerae moderately jaundiced, skin slightly so.

Chest—Expansion good and symmetrical, resonant throughout, breath sounds purile. There is bronchophony over the first, second and third dorsal vertebrae.

Heart—Slightly overacting, normal outline, soft systolic murmur at the base, loudest at the left. Blood pressure, 120-70.

Abdomen—Soft. Spleen down almost to the iliac crest and well out toward median line, firm in consistency, the edge being fairly sharp and the notch plainly felt. Liver dullness begins at fifth rib. The sharp edge may be felt on deep inspiration two inches below the costal margin.

Glands—The cervical, axillary, inguinal and right epitrochlear are palpable, being soft and flat.

Laboratory Findings—On admission, urine, specific gravity 1010, albumin a trace, no sugar, a few erythrocytes.

Blood—Hb. 40%; R. B. C. 3,352,000; W. B. C. 10,-320; Poly. 73%; Lymph. 21%; Large Mono. 4%; Trans. 1%; Eosin. 1%.

Wassermann negative.

Of the later findings, I will mention here only those of especial interest.

For malaria (Oct. 3, 1915) negative.

Von Pirquet (Oct. 11, 1915) negative.

Fragility of the erythrocytes (Aug. 31, 1915, Dr. Terry) Hemolysis began at .55 per cent and was not complete in any strength down to .25 per cent., below which point it was not tested. As with the other case reported, the normal control blood showed a lower degree of fragility. Several other estimations will not be included, as no controls were used, although some seemed to show an even higher degree of fragility. However, it may be stated that a comparison of the washed with the unwashed corpuscles showed no difference in the degree of fragility.

Auto-agglutination of the erythrocytes (Aug. 28, Dr. Handbridge) negative, (Aug. 31, Dr. Terry) negative.

Vital staining of the blood (Oct. 7) showed reticulation of 11 per cent. of the erythrocytes.

Bile in the urine, positive on Sept. 18, 1915, immediately following an attack of abdominal pain and associated with an increase in the jaundice; negative on Oct. 13, 19, 20 and 21.

Urobilin in the urine, negative on Aug. 31, Oct. 13 and 19; positive on Oct. 20 and 21 (associated with a slight increase in the jaundice).

Stools always normal color while under observation (analysis Oct. 15, 1915, Dr. Nicholl); well formed, dark brown, no blood, fat moderate, Schmidt test positive for hydrobilirubin; microscopically, mucus negli-

gible, no parasites, moderate amount of muscle residue and leucocytes.

Course and treatment. The patient was put upon increasing doses of Fowler's solution and it was thought that her jaundice was lightening and her spleen receding. On August 26th she had a mild attack of abdominal pain with no fever and no increase of the jaundice. The next day, however, her leucocyte count was 19,200 with 75% polys. Medication from this time on has been practically nothing but an occasional laxative. September 17th she had a violent attack of pain in the epigastrium, going through to the back. There was tenderness and rigidity across the intercostal arch but no fever. Following this attack her jaundice was much more marked and bile appeared in the urine, although her stools were not abnormally light colored. The jaundice lightened again, however, and she continued to improve.

At the last examination, October 20th, the child stated that she felt entirely well. Her jaundice was about the same grade as at the time of admission. Her cheeks and lips are well tinged with red. Tongue clean. Glands, the only ones palpable are the lateral cervical and right inguinal, which are small and soft. Lungs unchanged. No bronchophony over dorsal vertebrae. Heart unchanged. Supracardiac dullness in the 1st interspace 2 in., 2nd interspace 2¾ in. Spleen, 4 in. below costal margin, (½ in. below the level of the iliac crest) and out to ⅞ths of an in. from the median line. Liver dullness begins at 5th rib. Edge can be felt a finger's breadth below the costal margin. Hb. 91%; Index, .91; R. B. C., 4,640,000; W. B. C., 6,410; Poly. 48%; Lymph. 42%; Large Mono., 5.5%; Trans., 2%; Eosin., 2.5%. Moderate anisocytosis (large and small forms about equal). Slight polychromasia.

To sum up, we have chronic jaundice of the acholuric type, with absence of clay colored stools and bile in the urine, except as noted, urobilinuria, enlarged spleen, secondary anemia, with increased fragility of the erythrocytes and increase in the number of reticulated cells.

Tending to identify the case with the familial type, we find, the general mild course of the disease, the absence of auto agglutination, and the failure of the blood to show an excessive fragility of the washed as compared to the unwashed corpuscles.

In the second case presented the syndrome of hemolytic jaundice merely forms a part of a complicated picture, the whole apparently being due to syphilis, and fortunately clearing up under antisyphilitic treatment.

Case II. I. D., female, 28 years of age, single, a Hebrew, born in the United States, admitted to the Kings County Hospital May 13, 1915, on the service of Dr. Corwin, to whom I am indebted for the history of her first two weeks in the hospital.

Family History. Mother died at 62 and father at 53 of unknown causes. There is no history of tuberculosis, cancer, heart, kidney, or liver disease in the family so far as the patient knows.

Previous History. She has had measles, whooping cough and typhoid fever. Two years ago she spent eleven months in Bellevue Hospital, suffering from severe headaches. She thinks she had trouble with her kidneys.

Present Illness. Since leaving the hospital the vision in her left eye has not been very good, and she has had headache at times and periods of weakness, but has considered herself to be in pretty good health on the whole.

Two weeks before admission she began to complain of pain in the side and was told by a doctor that she had pleurisy. She has been in bed ever since. Her present complaint is pain in both sides of the chest and shortness of breath.

Physical Examination. T., 102; P., 128; R., 52. An extremely nervous woman suffering from orthopnœia. Poorly nourished. Moderate cyanosis, slight jaundice. The veins on the head and neck stand out prominently. Well marked exophthalmos, von Grafe's sign present. Thyroid moderately enlarged, particularly the isthmus.

Chest shows scattered moist rales throughout the back, with poor resonance and obscured breath sounds at both bases.

Heart enlarged to left and right, systolic murmer at the apex. Pulse rapid and soft, B. P., 100 — 70.

Spleen felt three fingers breadth below the costal margin. Edge is thick.

Liver felt an inch or so below the border of the ribs.

Fine tremor of the fingers and tongue.

Laboratory Findings. On admission, W. B. C., 5,600; Poly., 51%; Lymph., 40%; L. M., 6; T., 1%; E. 2%. Widal negative.

Wassermann, 2 plus.

Urine scanty in amount, sp. gr. 1022, loaded with albumin, and containing some finely granular casts. Phthaleine output, 2 hours, 14.5%. Some later laboratory findings will be reported here:

Fragility of the erythrocytes (August 31, 1915, Dr. Terry). Hemolysys began at .6% and was not complete in any strength down to .25.

Auto-agglutination of erythrocytes (August 31, 1915, Dr. Terry), positive.

Spinal fluid (June 11, 1915), 1 cell to cmm., globulin negative, sugar positive.

Vital staining (Oct. 7, 1915 not done until after all her symptoms had cleared up), reticulation of .5% of the erythrocytes.

Stools were normal color throughout. They were never analyzed.

Course and Treatment: For about two weeks she ran a low fever, after the first few days seldom rising above 100, although her pulse averaged 110. Her dyspnœia lasted about a week, and she then complained only of headache, pain in the region of the heart, and nervousness.

An eye consultant (Dr. Ohly) found her optic nerves pale, and marked arteriosclerosis in both eye grounds.

At the end of two weks her urine had cleared up, the phthaleine output being 50% in two hours. Her lungs showed no abnormality but the physical findings were otherwise about the same. Her blood picture at this time showed: Hb., 45%; R. B. C., 2,500,000; W. B. C., 6,500; Poly., 61%; Lymph., 26%; L. M., 1%; T., 7%; Eosin., 1%.

She was then put upon mercury salycilate intramuscularly. During the month that followed her temperature rose quite frequently to 100, and her pulse averaged 100. She seemed to be gradually improving, but was very nervous and complained at times of pain in the head and chest. A second Wassermann, after about six injections, was negative. She was then allowed to get out of bed, but this was followed by a rise in the pulse and an aggravation of her nervous symptoms, which suggested an increase of her hyperthyroidism. Her mercury was stopped at this time and she was given arsenic and iodides. She improved again and was allowed out of bed for the second time. This was soon followed by an acute attack, beginning with a severe chill and pain in the chest, and characterized by a low fever, great prostration with rapid pulse, and signs of a little fluid in both sides of the chest. This was confirmed by *x*-ray and aspiration, the fluid being clear,

sterile, and showing 58% of lymphocytes, 8% of large mononuclear cells and 33% of polys. Her blood showed 11,400 leucocytes, with 58% polys., 40% lymphocytes, and 2 large mononuclears. Blood culture sterile. Her jaundice, which had remained constant, was slightly deeper after this attack.

The following month she showed steady improvement, particularly after the use of iron caccodylate hyperdermically. Her temperature, pulse, and respiration remained normal and she was up and about. After six weeks of no mercury her Wassermann was reported as doubtful. However, she was put back on mercury. The last blood count, taken August 27th, showed 5,196,000 R. B. C. The leucocytes were 6,200 and the differential normal. Unfortunately the Hb. was not reported.

In October, when she left the hospital, she felt quite well, the exophthalmos was scarcely noticeable, the thyroid enlargement amounted to merely a lump in the isthmus, the jaundice was gone and the spleen was not palpable.

This case is an example of a transient, secondary, hemolytic icterus, cured by treatment of the underlying cause. The diagnosis is based on the acholuric jaundice, enlarged spleen and anemia with increased fragility of the erythrocytes, and positive autoagglutination test.

383 Clinton Avenue.

EPISTAXIS.

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At the present time, when every physician expects to find new discoveries in the columns of his selected journal, an apology would be expected for writing upon a common, every-day subject such as the treatment of epistaxis. Still, not only am I justified, but impelled to bring the matter to the attention of the general practitioner.

A few cases of "nose bleed" that have lately come under my observation have indicated to me that the general practitioner has neither an adequate conception of nor a systematic way of treating such cases. His treatment results in a greater loss of blood to the patient and makes the control of it more difficult for the specialist.

The cases referred to me were bleeding from three to four days. Upon examination I found the nasal chambers packed, the post nasal space being also packed, with the thread from the packing hanging down from the nose, instead of from the mouth. To remove the packing it was necessary to use an adenoid forceps, hereby inconveniencing the patient and inducing a coughing spell and excitement which caused the bleeding to become more severe in character.

Packing the post-nasal space will never stop a nasal bleeding; for the reason that in most cases of epistaxis the bleeding area is from the septum, either in the vestibular region, or farther back and nearer to the floor of the nose, especially when there is a spur encroaching upon the inferior turbinate.

The flow of blood into the pharynx makes the patient cough, thereby producing a strong negative pressure in the post-nasal space, causing a greater hemorrhage at the next cough. To prevent this occurrence is the sole object of post-nasal packing. When you are requested, therefore, to use post-nasal packing, it should be done as follows: Pass a Bellocq's cannula, or a plain, soft rubber catheter, threaded, into the nose until it reaches the pharynx, get a hold on the thread and pull it out for some length—then withdraw the catheter; now the patient has a thread in the mouth, and a thread in the nose. Tie a rounded piece of absorbent cotton at the middle of the mouth thread and pull the thread in the nose, thereby bringing the cotton high up in the post-nasal space against the choana. Then tie the two threads together. When you wish to remove the post-nasal packing, untie the thread and pull the thread from the mouth, when your packing will come out easily without any inconvenience to the patient.

The anterior nasal packing for epistaxis is a very crude, unscientific method, for as soon as the packed in gauze which produces pressure on the bleeding area at the beginning becomes saturated with blood, the pressure is weakened at the bleeding area, causing the flow of blood to continue.

Should the bleeding be stopped by the above method of packing, it must positively re-occur when the packing is removed. This will necessitate repacking. At the same time we must not forget that keeping the nose packed for a few days will interfere with the proper function of the eustachian tube, and an otitis media acuta will invariably follow.

The proper way to manage an epistaxis is to locate the bleeding spot, cauterize it, and leave the nose free from any packing whatsoever. This is accomplished as follows: The patient must be calmed and assured that there is no special danger, as excitability is a vasodilator. Good illumination is requisite. Push pledgets of cotton loosely wound upon a probe up into the nose and leave them there for a few seconds. In the interim wind up another piece of cotton and immediately insert upon removing the one in the nose. This changing process should be kept up for a few minutes. Invariably this will control the bleeding sufficiently to allow a thorough examination of the nose and to locate the bleeding area. Then take a piece of cotton, shape it in the form of a square, and saturate it with cocain 10% and adrenalin 1-000. Squeeze out the excess: this is important, for should a few drops of cocain dribble down the throat the patient will begin to cough, because a sensation will be produced that will lead the patient to think that something lies in his throat. Put the cotton into the nose, stretching it out on the septum, and leave it thus for 5-10 minutes. At the same time put a crystal of chromic acid upon the glass table, or on a clean piece of paper, heat an applicator upon an alcohol lamp, and make a bead of that crystal on the edge of the probe. Cool it off. Take the cotton out gently from the nose and touch up the bleeding area with the chromic acid. This done a shrinkage of the mucous membrane is immediately observed, indicating that the hemorrhage is controlled. Require the patient to remain under your observation for at least half an hour. The patient may then go home, where he should submit to a perfect rest, his head slightly elevated, taking precaution not to blow or spray the nose. The patient after undergoing this treatment is able to breathe through the nose with no danger of bleeding, or of the ear being complicated.

616 Madison Avenue.

The effect of emotion upon arterial dilatation is well shown in blushing. This was well known to Harvey, who says: "In modesty the cheeks are suffused with blushes, in fear and under a sense of infamy and shame the face is pale, but the ears burn as if for the evil they heard or were to hear; in lust how quickly is the member distended with blood and erected."

Special Article

HERMAPHRODITISM.

Blair Bell of London, recently presented before the Obstetrical and Gynecologica[1] section of the Royal Society of Medicine a case of the so-called "true hermaphroditism." This is so rare a condition that great interest attaches to the paper, which is published in full, with many illustrations, in the *Proceedings*: True hermaphroditism in man is included in the variety known as "glandular partial hermaphroditism." All the recorded cases except one of glandular partial hermaphroditism which may be accepted as authentic—and there are only four other possible cases in addition to Bell's—have been found to possess mixed gonads, so-called ovo-testes, with or without irregularities in the sex characterization of the genital ducts, external genitalia and secondary characteristics.

In 1873 Klebs[7], in his classical paper on the subject, claimed that "true hermaphroditism," as he called it, might occur in the following varieties in man:—

(1) *Bilateral hermaphroditism,* in which an ovary and testis are present on both sides.

(2) *Unilateral hermaphroditism,* in which there is an ovary or testis on one side, and an ovary and testis on the other.

(3) *Lateral hermaphroditism,* in which an ovary is present on one side and a testis on the other.

This classification has been adopted by many subsequent writers and it is supported by Blacker and Lawrence[1] who in 1896 reported the first case of ovo-testis, or combined ovary and testis. They investigated the literature up to that date, and came to the conclusion that of the enormous number of supposed cases of what was called "true hermaphroditism" there was only one —their own—recorded of the unilateral variety, after the classification of Klebs; and that there was possibly one—Heppner's[6], recorded in 1870—of the bilateral variety, and two—recorded by Schmorl[14] and Obolonsky[10] in 1888—of the lateral. The evidence in regard to these, except possibly to Blacker's and Lawrence's, cannot, however, be considered satisfactory, and it has been demolished by Meixner[9] and others. Tuffier and Lapointe[17], also, in their paper published in 1911, apparently accept only the case of Blacker and Lawrence of those published prior to 1897; but they add to this case those of von Salen[12], Garré[3], Landau and Pick[8], and Schickele[13], recorded subsequently to Blacker's and Lawrence's paper.

Pick[11], in an important paper published in 1914, discusses exhaustively the question of this so-called "true hermaphroditism," and comes to the same general conclusions as Tuffier and Lapointe—namely, that all the cases of this variety reported and accepted should be called "glandular partial hermaphrodites." This author records five cases of ovo-testis occurring in pigs, all of which he had himself examined. Pick also states that only four genuine cases had been recorded in man up to the date of his paper. Of those already mentioned, apparently he admits only the case of von Salen, but he adds those of Simon[15], Uffreduzzi[18], and Gudernatsch[4]. Foster[2] has recently recorded a similar case, which, however, cannot be accepted as no histological details are given.

Bell's case S. B., aged 17, was first seen by him November 8, 1912.

Past history: Menstruation had commenced during her fourteenth year. There was no menstrual pain. The patient was said to have suffered from inflammation of the bowels when she was 7.

Present history: *She has had amenorrhoea for eighteen months,* and there have been no menstrual molimina. The general health is good. There has been no trouble with the bowels or bladder. *The voice has been getting deeper.*

On examination nothing abnormal was felt in the abdomen or *per rectum.* The thyroid was found to be slightly enlarged. A diagnosis of suprarenal hyperplasia was made, and the patient was treated with ovarian and thyroid extracts for some time.

On August 25, 1914, the patient, who had not been seen for eight months, again presented herself. It was then at once noticed that she had become more masculine in appearance. *She had a slight mustache and a masculine distribution of the hair on the body.* There was still complete amenorrhœa.

The patient was examined under an anesthetic a few days later. *The clitoris was found to be much enlarged,* measuring 2 in. in length, and there was a well-marked prepuce. *Per vaginam,* the left genital gland could be felt somewhat enlarged. No tumor was discovered in the suprarenal region. Subsequently, the patient was admitted to hospital. She was then 19, and the amenorrhœa had lasted for over three years.

On September 3, 1914, the abdomen was opened in th middle subumbilical line. The left genital gland was found to be the size of a plum. It had a very smooth surface and resembled a testis; the superficial blood-vessels were injected, especially in the neighborhood of the hilum. No adhesions were present. A wedge-shaped piece was removed lengthwise from the convexity of the organ for histological examination. When cut into for the removal of this piece of tissue the organ presented a yellow, fatty appearance. The raw surfaces were brought together with a catgut suture. The genital gland on the right side appeared to be a normal, somewhat small ovary. A piece was removed for section in a similar manner to that adopted in the case of the left genital gland. Finally, a small graft from an ovary removed from a patient operated upon a few minutes before was implanted in the uterus. *The suprarenal regions were palpated with the hand in the peritoneal cavity, but beyond a slight rough feeling in the neighborhood of the left, which might have been due to the head of the pancreas, nothing abnormal was discovered.*

The report from the Pathological Laboratory on the pieces excised was as follows: "Right ovary: Section shows an ovary, the stroma of which consists of very dense connective tissue, but ovulation has taken place, there being present a large corpus luteum and the scars of the corpora lutea, and also an almost mature Graafian follicle. Left ovary: Section shows what is undoubtedly a columnar-celled carcinoma with well-marked acini."

Placing an unwise faith in this report, I reopened the abdomen on September 22, 1914, and removed both ovaries, the tubes, and the fundus of the uterus. The patient made a good recovery, but subsequently suffered from slight menopausal symptoms.

When I came to examine the sections myself I came to the conclusion that the left genital gland was, in my opinion, an ovo-testis, and not the seat of malignant growth as reported. This opinion was afterwards confirmed by the report of the Pathological Reference Committee of the Liverpool Medical Institution.

The specimen removed consists of the fundus uteri, the Fallopian tubes and the genital glands, each in the

position normal to the female and attached to the uterus by an "ovarian" ligament.

A laryngeal examination was as follows: "The larynx appears to present definitely male characteristics; the cavity is very roomy and the vocal cords are both broader and larger than those of the ordinary female larynx. Using a graduated laryngeal mirror, I attempted to measure their length and, although it is difficult to do this with much accuracy owing to the distance between the mirror and the objects reflected in it, I was able to satisfy myself that they measured not less than 24 mm., which is scarcely below the average in the male. The breadth appeared to be nearly one and a half times what is usual in the female. The epiglottis and arytenoids are large for a female, but I think less strikingly so than the true cords and the laryngeal cavity."

The histological findings in this case are probably typical of glandular hermaphroditism, in which there is an ovo-testis on one side only.

The right genital gland is a normal ovary, although small and not in a particularly active state. There are to be seen in section a mature Graafian follicle and small hyaline bands in the ovarian stroma, the remains of corpora albicantia.

The histological appearances of the left organ present quite a different picture. A low power view shows that the central portion which forms nearly the whole of the organ, is made up of what, in the first instance, was supposed by the pathologists to be a malignant neoplasm. A thin capsule of normal ovarian tissue—Graafian follicles, primordial ova and stroma covered in places by capsular epithelium—surrounds this central portion.

The nature of the central part of the organ is, of course, the interesting feature of the case. It consists of tubules lined for the most part with several layers of columnar cells, although in places the tubules are seen to be lined with one layer of epithelium, and sometimes to be widely distended with secretion of irregular masses of similar cells and, most important of all, of a large number of interstitial cells which are eosinophile, and resemble exactly the interstitial cells of the testicle. There is, too, a large quantity of fat which stains well with Sudan III.

A section through the hilum of the ovo-testis shows that the epoöphoron or its homologue is present, although the structure is somewhat unusual; irregular tubules of large dimensions and containing secretions are seen cut across. These tubules are lined with several layers of polyhedral cells with prominent round nuclei. In places there are giant cells in the walls of the tubules beneath the epithelium, and they are especially well marked in the small intratubular projections which occur here and there. The nature of these giant cells is doubtful. They are probably due to the irritation of the secretion of the tubules. Bell thinks they are similar in nature to the giant cells which may be seen in the walls of the ovarian dermoids[16].

The masses and columns of cells in the central portion of the ovo-testis, which do not form tubules, resemble what may be seen in the early stage in the development of the normal testis; they have none of the appearance of malignant cells, for their nuclei are regular and quiescent, and the cells themselves are nearly all of one size and appear stable in their mode of growth.

With regard to the interstitial cells, it might be thought that they were ovarian and not testicular. As a rule, however, the interstitial cells of the ovary are much smaller, and never have I seen them so well marked, either in normal or pathological circumstances, as here shown. Further, if these interstitial cells were really ovarian one would expect to find them in the ovarian portion of the ovo-testis, where they are entirely absent, rather than in the testicular portion.

This is the general picture presented by an ovo-testis, but in the histological diagnosis of the condition there must always be difficulty. In the first place, there are masses of columnar cells which have no definite tubular arrangement. It was probably this irregularity of distribution which gave rise to the opinion already alluded to, that in this case the growth was malignant. In some parts, of course, there is a definitely tubular arrangement of the darkly staining columnar cells; and in other places tubules may be found lined with a single layer of epithelium, and containing secretion. There is, however, never any spermatogenesis to be seen.

It is particularly interesting to note in regard to the case recorded above, that the patient commenced life and passed puberty as a normal girl, menstruating regularly for eighteen months; that menstruation had then ceased and masculine characteristics developed, and that in spite of this she suffered from menopausal symptoms after operation. Nine months after operation, a complete change is to be noted in "her" appearance: the moustache has fallen out, all the hair on the legs has vanished, the voice is less deep, the skin less coarse, and her figure generally is much more feminine in regard to plumpness and outline. This, surely, is dual sex characterization if ever there were such a thing.

With regard to the occurrence of the gonadal elements of the two sexes in one individual, one would naturally infer, from a developmental point of view, that the different elements would be combined in one organ.

In the earliest stages of development—that is to say, until about the thirtieth day—the histological appearances of the gonads give us no indication as to the future sex differentiation about to take place in these organs. In this undifferentiated stage the gonad is divided into two portions; the *capsular epithelium*, and the central *epthelial nucleus* composed of "indifferent" cells Subsequently, however, if a testis is to be evolved, very soon after this date the cells of the epithelial nucleus immediately underlying the capsular epithelium become condensed and form the tunica albuginea, while the rest of these "indifferent" cells, among which the genital cells lie, become arranged in the form of cell masses or cords. These cords, around which and in which the spermatogonia—as the genital cells are now called—are collected, become the seminal tubules and eventually join the genital tubules outside the gonad. The interstitial cells of the testis are formed from connective tissue cells (mesoderm), which grow in from the direction of the hilum and fill the interstices between the seminal tubules. We shall see presently that the interstitial cells cannot originate from primary or secondary genital cells.

If, on the other hand, an ovary is in process of formation, the "indifferent" cells (epithelial nucleus) of the genital cell mass remain undifferentiated longer than in the case of testicular development, and they never become arranged in cell masses or cords. Instead, the epithelial nucleus becomes broken up by branching septa of ingrowing connective tissue, which divide the ovary into a meshwork of compartments. The tunica albuginea is formed by the meeting of these septa beneath the capsular epithelium. The indifferent cells enclosed in the connective tissue meshwork are believed to form secondary oögonia, but ultimately most of these degenerate and the spaces they previously occupied in the meshwork of connective tissue become filled by ingrowths from the septa. The interstitial cells of the

ovary, like those of the membrana granulosa surrounding the surviving ova, are derived from the connective tissue stroma. In these circumstances, of course, the genital tubules atrophy, and their remains may be recognized, extending from the hilum of the ovary through the mesovarium into the mesosalpinx, as the epoöphoron.

We can understand, then, that if there be any hesitancy in the primary determination of sex the seminal tubules may commence to develop in the epithelial nucleus, even though they do not become functional in the ordinary sense of the word; and that the testicular interstitial cells may develop around them. One great difficulty, so it appears to us, and one which requires further elucidation, is why an ovo-testis may be found on one side in these circumstances and not on the other. Nevertheless, the plan of development described above almost negatives the possibility of the development of a separate ovary and testis on the same side; for it is extremely difficult to understand how one part of the genital cell mass could separate itself from the other and develop into a testis, while the remaining portion developed into an ovary.

It would seem, therefore, almost inevitable that, when there is dual characterization in the gonads, the only possible combination must be a testicular central portion surrounded by an ovarian. Bell lays down the following as essential conditions which must be established before any case can be considered one of glandular partial hermaphroditism:—

(1) The hermaphroditic gonad must be an ovo-testis, composed of ovarian tissue with definite primordial ova, Graafian follicles or corpora albicantia, surrounding a central portion containing seminal tubules and testicular interstitial cells.

(2) The subject must show in the primary or secondary characteristics, other than the sex glands, evidences of hermaphroditism.

If these conditions be considered critical very few cases, probably only three (von Salen's, Garré's, and Blacker's and Lawrence's), apart from Bell's, would pass the test.

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Liquid Paraffin for Infants.

Hill says:

1. In the chronic constipation of infants, liquid paraffin in large doses gives the best results the writer has yet obtained.

2. In severe gastroenteritis and ileocolitis its use was disappointing, possibly because too small doses were given.

3. In conjunction with lactic acid bacilli, very remarkable results may be obtained in that group of diseases which are caused by the action of putrefactive or allied poisons absorbed from the intestines and finding a favorable, susceptible, sympathetic nervous system.—(*Arch. Ped.*, No. 2, 1915.)

"The Necessity of Preparedness."

The European war is teaching us many lessons in patriotism, economics, finance and incidentally medicine. Some of our cherished beliefs will be thrown into the discard as the result of the experience gained by the medical men of the belligerent armies.

In a recent conversation with the surgeon-general of the largest command in the British army, the editor of THE MEDICAL TIMES asked what fact had been most impressly fixed in his mind by the events of the war. He promptly answered, *"The Necessity of Preparedness."*

In amplifying on this subject, the surgeon-general pointed out that, the pacifists to the contrary notwithstanding, the events of the past sixteen months had plainly demonstrated that it behooves every nation to have its military house in order and to be abundantly prepared to cope with every emergency.

From a medical standpoint the general (for he is a major-general) said every nation should have a great number of civil practitioners, thoroughly trained in military medicine. "Not," he said, "like the members of the Medical Reserve Corps of the United States army, who, I understand, are eminent in civil medicine, but are quite lacking in the education which would make them of real value in case of war.

"No matter how great a man may be in his chosen specialty, he is worthless as an army surgeon unless he has had a special training under military officers, because the practice of civil and military medicine is as far apart as the poles."

The interview brought out the fact that the territorial medical officers, corresponding to the medical officers of the National Guard of our different States, had been of the greatest service to the country. They were splendidly trained in military medicine and military life, having been compelled to put in a month each year in camp or in a military hospital. In consequence these men received commissions in the Royal Army Medical Corps and went into the trenches, to the field, evacuation or base hospitals, as necessity demanded, and their work had been on a par with that of the regular medical officers of the army.

Not so, however, had been the services of civil surgeons who had been given commissions without previous training. They could not fit into the military routine gracefully. They were usually attendants at some civil hospital which had been for the period of the war transformed into a military hospital and they continued their usual duties, except that they had soldiers instead of civilians for patients. The most important service of the army surgeon is to restore every ill or injured soldier to duty at the earliest possible moment. Civilian surgeons, the British find, can not learn this important lesson, and they keep men in hospital who are perfectly fit to be on the firing line.

The weather in England during September and October was unseasonably warm for that coolish and wet country and in consequence the scrotums of many soldiers were unusually pendulous. In one big civil-military hospital a well known surgeon suddenly metamorphosed into a colonel in the army medical service on account of his high surgical standing, operated for varicocele on over fifty soldiers and in consequence prevented those men from returning to duty. Had that colonel been a closer observer of atmospheric conditions or had he possessed military training, he would have ordered suspensories for his pendulous patients and sent them back to France six weeks sooner than he did. Other pseudo military surgeons developed a mania for appendectomies, herniotomies, circumcisions

and a host of other operative and decorative surgical procedures, most of which were unnecessary and often which made the soldiers unfit for future military service.

Many instances have been enumerated showing that lack of military training unfits a civil practitioner to render the best service, despite his anxiety to give it.

The surgeon-general continued:

"I observe that the United States is planning to reorganize its army and that will mean the reorganization of its Medical Corps. I am sorry the United States army has no medical observers with the British army, for the lessons they could learn at the front and in the hospitals would be invaluable in making plans for your new army. May I suggest, however, that your army authorities make the most not only of your National Guard medical officers, but of the physicians in civil life, who would like to serve the country intelligently as surgeons with the forces.

"I am quite familiar with your present scheme of Medical Reserve officers, but as near as I can learn, most of them are officers only by the courtesy of their lieutenant's commissions. In other words, they are actually officers, without being trained in the duties of officers.

"A uniform does not make an army surgeon, no matter how decorative it may be. The doctor who proves of value to the country in time of war is the man who knows his business as a practitioner first and then how to successfully apply his knowledge under the conditions arising from war. That means that he must undergo a thorough course of instruction.

"I do not go so far as to say that reserve medical officers must go to an army medical school, such as you have in Washington, but I most certainly advocate weekly instruction in an armory, of a most practical nature, supplemented by two weeks in an actual camp of instruction in the summer and a course in a military hospital in the winter. The latter can be given to small squads of men at intervals. In New York, Washington, Chicago, San Francisco and other points where you have military hospitals, a few men could devote half a day once a week to such hospital work to the very best advantage. This work should be laid out by your chief medical authorities, the men should be definitely ordered to duty and should be paid accordingly. If some such plan could be carried out your country would find itself well off for competent medical officers in time of sudden stress."

Inquiry shows that the prominent men who have been taken into the British army since the commencement of the war have been given high rank. None is lower than a major and most of them are colonels or lieutenant colonels. Among the well known civilians now in the army who are colonels are Sir Almrothe E. Wright, Sir John Rose Bradford, F. F. Burghard, Alexis Thomson, Sir W. P. Herringham, Cuthbert Wallace, Frank Romer and H. M. W. Gray and J. G. Adami, of Montreal; lieutenant colonels, Percy Sargent, Robert T. Leiper, A. R. Wilson, Arthur S. Woodwork and Sir William Hutcheson Poe and S. Hanford McKee, of Montreal. Among the civilian majors are Gordon Holmes, W. J. Orr, A. R. Ferguson, H. C. Marr, Wm. Forsyth Jones, John Harley Brooks, Francis M. R. Walshe, Hamilton Irving and Ernest F. Eliot.

Experience has shown that the better known medical men do not care to accept commissions as lieutenants and captains. This may be of value to the authorities in Washington in determining the rank of the reserve officers in the new army, if the reorganization bill becomes a fact.

In the British army this problem has been dealt with in this manner. Surgeons in the regular army belong to the R. A. M. C., as the Royal Army Medical Corps is known, which corresponds to the medical corps of the United States army. Despite the war, no civilians are admitted to this body except upon examination, and then only as lieutenants. (There is no such rank as first lieutenant in Great Britain. An officer is a lieutenant or a second lieutenant.)

The medical officers of the territorial army may be lieutenants or brigadier generals and they are designated as Capt. John Smith, R. A. M. C. (T.). They constitute a separate force, but are under the chief medical officer of the British army, who at the moment is Lieut. Gen. Sir Alfred Keogh, director general of the army medical services.

To meet the necessities of the war, prominent civilians are taken into the medical establishment, not as members of the A. R. M. C. or the Territorials, but as officers in the army medical service, so that Dr. Lovell Gulland, professor of the practice of medicine in the University of Edinburgh, is known as Colonel Lovell Gulland, A. M. S., acting as consulting physician at Malta, while his surgical confrere at the university, Mr. Alexis Thomson, is a colonel, A. M. S., and is consulting surgeon to the Third Army in France.

Had England been as well prepared for war as her critics believe she should have been, the army medical service would have been fully organized long ago and its members given the necessary military instruction. As matters stand, England has had to develop its medical corps, as it has its army, after the commencement of hostilities.

All of this goes to prove the necessity of preparedness. "In time of peace prepare for war." If the pacifists of this country would realize that, despite all vapid vaporings, men will fight until such time as their ideals are far higher than today, they would turn to and make the United States such a formidable nation that none would dare attack her.

Prognosis and Treatment of Acute Nephritis.

J. Phillips believes acute nephritis may end fatally, or the patient may recover with a damaged kidney, or complete recovery may occur. He cites a number of cases of complete recovery as far as could be determined by analysis of the urine, blood pressure determination, and physical examination of the heart. The thalein test, and the determination of the non-protein nitrogen are valuable prognostic methods. In dealing with the treatment, he speaks of the importance of adopting prophylactic measures.

Treatment proper should consist of limiting the extension of the inflammatory condition, reducing the work of the kidney to a minimum, and applying special remedies for individual symptoms, such as uræmia, edema, etc. Rest in bed between blankets in a warm room, with good ventilation, is essential. The patient should be well purged with saline cathartics. The diet should be bland. During the earliest stages milk should be the only food. When edema is present the quantity of fluid should be limited. At a later stage water may be given more freely. The amount of salt in the diet should be limited. Sweating should be induced by vapour baths, hot packs or hot air baths. Caffein is useful at times, as are diuretin, theocin and infusion of digitalis. For hypertention diaphoretics and cathartics usually suffice, but nitro-glycerine may be necessary.—(*Cleveland Med. Jour. No.* 2, 1915.)

Diagnosis and Treatment

Physical Signs of Inflammation of the Antrum.

G. S. Hett gives these signs as of importance:

Anterior rhinoscopy.—Presence of a streak of pus of mucus under the anterior end of the middle turbinal.

Posterior rhinoscopy.—Pus or mucus flowing under the posterior end of the middle turbinal or lying in the post-nasal space.

Fallacies.—*Presence of pus* may be due to suppuration of one of the other nasal accessory sinuses. *Absence of pus* may be due to the fact that the antrum has recently emptied itself, or that the inflammation is not of a purulent nature at the time of examination.

Transillumination.—*Absence of crescent* may be due to pus or mucus in the cavity, or to chronic thickening or degeneration of the walls of the cavity. *Presence of crescent* shows a healthy antrum.

Fallacies.—*Absence of crescent* may be due to thickness of coverings, i. e., dense face bones or a fat face. *Crescent may be present* when the antrum contains polypi, but no pus or mucus; or, the antrum may show hyperclear in ceases of dental cyst or large single antral polypus.

Puncture and lavage.—The *presence of pus* shows suppuration in the antrum. The *absence of pus* shows a healthy cavity.

Fallacies.—*Presence of pus.* The antrum may simply be acting as a reservoir for pus which has trickled in from a suppurating frontal sinus. If the nasal cavity is not first cleansed of secretion lying in it, this may appear on washing out the antrum and be thought to come from the cavity of the latter. *Absence of pus* does not exclude infection, for the cavity may have emptied itself at the time of examination, or the disease may not be of a suppurative nature.

X-rays.—A marked opacity of the antral area denotes a cavity containing pus or chronic thickening and degeneration of the mucous membrane of the walls. It is seen, too, in the presence of a single polypus or multiple polypi. *X*-rays also show tooth stumps, unerupted teeth, cavities round the teeth, alveolar abscesses leading into the cavity, or pyorrhea. As these conditions may bear an important relation to antral disease, the importance of their detection will be manifest.

Fallacies.—An antral opacity, if present, may be due to a former radical operation, when the cavity, whether healthy or not, remains dark; if *absent*, this does not exclude mucus or even thin pus, if the latter does not fill the cavity.

Technique.

Transillumination.—An ordinary transillumination lamp is placed in the mouth, and the patient examined in a dark room or under a dark cloth. The most important point to notice is whether there is a crescent of light under the eye. The whole cheek may appear lighter on the side of an antral polypus or dental cyst.

Puncture and Lavage.—This is usually performed, after cocaining the inferior meatus by placing the point of a Lichtwitz's trocar against the maxilary process of the inferior turbinal, and pressing upwards and outwards so that it enters the cavity, which subsequently is washed out through the cannula. Hett has found this more satisfactory than attempting to suck the secretion out by a syringe.

It has been possible to dispense with puncture and lavage as a diagnostic measure in many cases; this is frequently an advantage, for the results are often uncertain, and a negative result does not show that an antrum is necessarily free from disease. The process may be painful, especially in cases of acute inflammation. Further, there have been cases in which symptoms, varying from discomfort to severe collapse, have followed this test.

Puncture and lavage are often useful as a method of treatment but should be checked by *x*-ray examination.—(*The Practitioner*, July, 1915.)

Impotence From Tabes.

Wilfred Harris of London says that in cases of impotence in men with tabes dorsalis in which the symptoms are progressing, if the age is not above sixty, and particularly if the Wassermann reaction in the cerebro-spinal fluid is positive, with an exaggerated lymphocyte count and presence of the globulin reaction, much good may be obtained by energetic antisyphilitic treatment, such as intravenous salvarsan combined with daily mercurial inunctions.

He thinks salvarsanized auto-serum most valuable in combating and arresting the symptoms of the disease, causing a greater improvement in the general condition than any other form of treatment. In this treatment, after giving the intravenous dose of 6 gm. of salvarsan, he draws, fourteen days later, six to seven ounces of blood from the arm by means of a needle, and allows it to clot in a sterilized flask, taking care that it is not moved for fifteen hours. Then he decants off the clear serum, and with full aseptic precautions injects from 40 to 50 c.c. of the serum intrathecally, after draining off somewhat less than this amount of cerebro-spinal fluid by means of lumbar puncture. He finds it far better to wait a fortnight before withdrawing the blood for little or no good effect is produced if the blood is withdrawn an hour after the intravenous injection of the salvarsan, as originally advised by Swift and Ellis. —(*The Practitioner*, July, 1915.)

Paratyphoid Conditions.

Many soldiers in the Dardanelles have been suffering from a febrile condition of a paratyphoid type and the question uppermost in the minds of the military medical authorities is as to the exact causes of this condition. One of the surgeons-general of the British Army informs THE MEDICAL TIMES that it is either a modified enteric fever, attacking inoculated soldiers and consequently bereft of its dangerous qualities, or a form of dysentery (a disease also very prevalent in the Gallipoli) or it may be a definite typhoid condition. The surgeon-general adds that the mortality is practically nil. His bacteriologists are hard at work searching for carriers, although up to the last of October, none had been definitely located.

Added interest is given this subject by a contribution to the *Lancet* of October 16 by Capt. Henry Robinson, R. A. M. C. He reports on 89 cases and finds that paratyphoid fever (A and B) is a disease much shorter and milder than typhoid fever, as met with in civilian practice. Its onset may be gradual or moderately sudden, and headache and abdominal pain are the most constant symptoms.

Shivering at the onset; cough, pains in the limbs and back, diarrhea, constipation, nose-bleeding are the next commonest symptoms; all these are met with in about 30 to 60 per cent. of cases. Vomiting at onset and sore throat later are by no means rare. Definite rose spots in successive crops are found in about 60 per cent. of cases. The abdominal reflex is absent in rather under 50 per cent.

The pulse rate is extraordinary slow, even more so than in typhoid fever. Relapses of brief duration are not uncommon. Several complications occur more rarely and are the counterparts of those associated with typhoid fever. The paratyphoid bacillus (A or B) is frequently isolable from the feces, but in many cases not until after the symptoms have subsided. It is also occasionally isolable from the blood, urine, and from metastatic abscesses.

Distinct help in diagnosis is obtainable from repeated quantitative Widal reactions, but much experience is required for their interpretation, and they must be read in conjunction with the clinical evidence and with the history of previous inoculation.

On the assumption that this disease is of the enteric group, the same precautions as in the case of true typhoid fever are indicated against its spread. In particular carriers must be watched, for bacilli may be present in their urine and feces after all symptoms of illness have subsided.

Of the 89 cases, 47 showed a paratyphoid bacillus, either A or B, but Robinson says clinically there is no difference between the A and B infections. The pathology is indefinite, as the bacillus was found both in the blood and urinary tract, both a systemic infection and blood-borne contagion are suggested, while its presence in the feces would make one believe very strongly in ulceration of the bowel.

The etiology is obscure and the incubation period would seem to be, at the least, 13 days.

Analysis shows that in 27 of them the pulse rate was at least once (and nearly always several times) under 50, while in 15 more it was at least once (and usually several times) under 60. In the five cases where the pulse rate was never below 60, in one B. typhosus was isolated as well as paratyphoid B, in another there was an acute cholecystitis going on when the patient came under observation, in a third femoral thrombosis came on as an early complication, and in a fourth the patient indulged in surreptitious smoking. Whether these very extraordinary pulse readings have any clinical bearing upon paratyphoid fever, or whatever the disease of these men was, is a thorny question. One suggestion that has been made is that they are the result of previous fatigue and exhaustion incurred during the campaign, but the excellent conditions in the trenches militate against this theory.

Another suggestion was that confinement to bed on a much reduced diet after a quite brief and mild (i.e., non-exhausting) illness might produce a very slow pulse rate in anyone. This explanation fails to take into account the cases in which pulse rates of 48 or thereabouts coexisted with temperatures of 100 deg. F. or more, and also those in which very slow pulse rates were found in cases where the attack had been by no means brief or mild. Furthermore, the diet prescribed was far removed from starvation, though it was certainly stringent.

No cardiac abnormality was ever found in conjunction with the very slow pulse-rate, except that in two cases a rhythmic irregularity was present. The following complications were met with once: Purulent otitis media; femoral thrombosis; cystitis (paratyphoid A was isolated from the urine); ischio-rectal abscess (paratyphoid A was isolated from the pus of this abscess); jaundice; enlarged gall-bladder without jaundice No case of bowel hemorrhage took place, except in two cases at an early stage of the illness. No case of perforation was encountered. The prognosis was excellent, every case recovering. In these cases this method of bacteriological identification was used: To 10 c.c. of glucose-bile-salt broth was added ½ c.c. of blood drawn from a vein in the arm and incubated for 24 hours at 37 deg. C. Any growth on this medium was plated on to MacConkey's lactose-bile-salt agar, whence a subculture was made on to the ordinary agar and incubated 24 hours. If Gram-negative bacilli were present, the culture on ordinary agar was put through MacConkey's bile-salt sugars for 24 hours. Feces were diluted in normal saline and a loopful plated direct on to MacConkey's lactose-bile-salt agar. Any organisms thus identified were subjected to the Bordet-Durham agglutination test up to 1/200, carried out with the subculture from ordinary agar. The complement fixation test was not carried out.

Of these men 31 had been inoculated twice within the previous 12 months, and 10 of them once; 2 had been inoculated, but not within the previous three years; 2 had never been inoculated at all. About the remaining 2 the notes do not give information, but one of them had had typhoid fever in India. As far as these figures go, they do not show that any marked protection is gained against paratyphoid infections from antityphoid inoculation.

On admission, and for four or five days after the temperature reached normal, the bowels were opened by enemata every other morning; after that aperients were allowed instead. Stimulants were seldom necessary. No intestinal antiseptics were given, nor any other drug intended to act upon the enteric ulcers or their causative organisms. Cough and bronchitis were treated on ordinary lines. Cystitis, which in true typhoid cases had yielded very satisfactorily to hexamethylene-tetramine, was more rebellious in the single case of paratyphoid infection: it could be controlled by this drug, but reappeared on stoppage of the drug.

Rest in bed is indicated during the pyrexial period and for some days afterwards. Diet was restricted to milk, barley water, and given two-hourly a proprietary food. A spoonful or two of tea to flavor the milk was allowed. The usual routine program was to add jelly on the third day of completely normal temperature. Custard on the fourth, porridge and chocolate on the sixth, bread and butter and jam and tea on the seventh days. On the eighth day an egg, and on the ninth two eggs were ordered; about the eleventh or twelfth day chicken diet (less vegetables) was allowed; and in two or three more days ordinary full meat diet was reached.

This paratyphoid or dysenteric condition, as suggested by the surgeon-general THE MEDICAL TIMES opens up a new field for investigation and is not the least interesting of the medical problems developed by the present war.

Acute Actinomycosis of the Parotid Gland.

E. D. Telford, observes that in view of the fact that the ordinary chronic variety is still frequently missed, and a diagnosis, often of tuberculosis, or sarcoma, is wrongly made, the acuter cases of actinomycosis are, owing to their greater rarity, still more likely to be a source of error in diagnosis. His two cases present a remarkable similarity in onset and symptoms. The route of infection was by the parotid duct, and from this point of entry the disease rapidly infiltrated the gland itself. The infection was, in the one case, derived, no doubt, from the habit of chewing corn whilst engaged in feeding poultry; in the other case the patient had, a week before the onset, played with some children in a field of ripe corn, but no more exact source of infection could be discovered. Within seven days of onset the barrier of the glandular capsule was broken down, and a most

acute diffuse cellulitis of the face resulted. In this acute form the fungus enters by the parotid duct and, within a few days of entry, gives rise to an acute parotitis. The disease then bursts through the limits of the gland, whereupon a very acute cellulitis develops which may extend far over the scalp and well down the neck. There is great constitutional disturbance and marked evidence of septic absorption. At this stage the swollen parts are likely to be incised, when the incisions will be found to yield no pus, but merely a sanious debris. The cut tissue will be seen to be diffusely infiltrated, of a dirty gray color, flecked with points of yellow. The fluid and debris obtained may be extremely foul, indicating a mixed infection of organisms from the mouth. The incisions, although they may ameliorate the acute condition, will probably fail to arrest the disease and the further spread of the lesion with fresh points of softening will be seen. These, when in turn incised, will tend to assume a chronic course until, ultimately, the diagnosis is thrust upon the observer by the yellow granules of the fungus.

Once the diagnosis is established, appropriate treatment in addition to the incisions should be given. Iodin has appeared to yield good results in the more common chronic forms of the disease, and should certainly be used freely in these more acute cases. One of the cases took 240 grains of potassium iodide each day for several weeks with distinct benefit. In addition, iodin should be given locally. A 10 per cent. solution of iodipin may be injected into the infiltrated area at several points to the daily amount of 10 c.c. The incisions and sinuses should be irrigated freely with a weak mixture of tincture of iodin and water.

In the second case 0.3 gram neo-salvarsan was given as soon as the diagnosis was established on the twelfth day of the illness. Although this case was a very acute one, with extremely foul discharge, there was within twenty-four hours of the administration a very marked increase in the amount of discharge and a rapid improvement in the local and general condition. This improvement was so well maintained that a further injection which was contemplated was not given. In these more acute instances early diagnosis is much to be desired. Telford's first case had been treated as "mumps" and had been in existence for three weeks when brought to his notice. This case, in spite of energetic treatment, took five months to heal, and resulted in very marked disfigurement. The second case, which had a history of only seven days, was, by the help of free drainage, much iodin, and probably of salvarsan, well healed within eight weeks, and the subsequent facial appearance of the patient was not the least satisfactory feature of the case.—(*Brit. Med. Jour.*, Oct. 9, 1915.)

The Treatment of Infected Wounds.

At the Royal Society of Medicine on Oct. 8, Colonel Sir Almroth Wright, illustrated in a demonstration by himself and his distinguished pathological workers, how he proposed to alter the practice of military surgery in many directions. Phenol is the agent which will assuredly affect the surgery of peace as well as of war. We have been, Wright suggests, relying on outside aid when the tissues and fluids of the body were sufficient for the task, and required merely some kindly assistance in performance of their delicate functions, not the repelling interference of potent chemicals. That the chemical substance often did no harm is but a qualified testimonial to its value, and in Wright's estimate an antiseptic substance, like iodin, applied to the outlet of the wound served at most to disinfect its excreta, as it never came into intimate contact with the wall itself, in which the delicate biological processes were taking place.

Of the body tissues the blood cells are naturally those the most easily examined, both because they can the most readily be withdrawn from the body for examination and because the conditions of their action can be fairly reproduced *in vitro*. We use the phrase *in vitro* advisedly rather than "in the test-tube," as for these and similar investigations the test-tube has had to give place to the capillary tube in various forms, but all forms such as can be fashioned by the unaided hand of man from simple glass tubing with the help of a gas or petroleum flame. By experiments conducted in capillary tubes it can be shown that the presence of chemical disinfectants does not produce all that has been expected on an infected blood-clot. The same organism which is powerless to pass a wall of leucocytes, and which is so weakened by exposure overnight to normal blood serum that it no longer multiplies on nutrient media, "likes," as one worker has put it, "to have its tail dipping into carbolic."

At the beginning of the war acquaintance, dropped for the life-time of most of us, was renewed with the bacillus perfringens. In countless cases where the tissues had not merely been infected but extensively bruised and lacerated, an ominous crackling began to appear, with an evil smell and an intense and frequently fatal systemic poisoning. Every kind of strong chemical was used in the treatment of these wounds, but the bacillus appeared practically invulnerable, and the successful cases were, as we know, especially from the German side, those in which the whole infection was cut away *en masse* with the knife. Sauerbruch, one of the deftest of surgeons in the German profession, at all events assured a great surgical congress at Lille that this was the only method which he had found to give success. Contused and lacerated wounds have occurred in plenty in this war. Gas may bubble out of some of them, but there is no septic absorption when the wounds are sufficently opened and drained. A strong solution of common salt produces a copious flow of plasma which cleans up the wound. "Keep moving, please," is the instruction to the microbes, "and move outwards only." If sufficient emergency exits are provided the traffic is not allowed to get congested at narrow places, fast in the center and slow along the edges, with backwaters at each end where the flow is intermittent; but by the sympathetic study of the physical principles underlying drainage the flow of serum and of leucocytes is kept continuous. On the internal wound surface the corpuscles form a layer which the microbes cannot penetrate. Their presence in the wound does not matter; it is what passeth into the man that defileth. The uniform flow of plasma is always washing out into the draught the microbes in the wound; some of these the plasma can deal with itself, and if it is long enough in contact with them it may even render them innocuous. Among these is the bacillus perfringens. The remainder, streptococci and staphylococci, fall a prey to the leucocytes.—(*Lancet*, Oct. 16, 1915.)

Tuberculosis of the testicle is similar to that of the lungs. There are three chief channels through which the testicle can be infected: the lymphatics, the blood-vessels, and the vas deferens, besides infection by direct extension. It may occur as a primary disease, as secondary to tuberculosis elsewhere, or as an incident in general miliary tuberculosis. Gonorrhea and general excesses undoubtedly dispose to tuberculosis of the testicle.

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Should Attending Hospital and Dispensary Physicians Be Remunerated?

That so many men are apparently willing to serve hospitals and dispensaries without remuneration is one of the wonders of the modern world. We suppose that the idea of remuneration never occurs to some of these consecrated ones.

If medical men had not allowed themselves to be used as they have been, there can be no doubt that the organization of our hospitals would have proceeded along far better lines. Not only has free medical service been immoral in itself, but it has been largely responsible for faulty hospital organization. We shall attempt briefly to make our meaning clear.

Cheap, in fact free, medical service accounts largely for the unnecessarily large number of hospitals. If medical men had to be paid for their services a far better system would be in vogue. A few standardized hospitals, with a central purchasing station, would serve all real municipal needs. Such hospitals would not hobble through their institutional lives financially crippled, badly administered, and manned by an absurd army of doctors who fatuously act as though they were above all economic laws. Persons desirous of bestowing funds in behalf of the sick poor could be certain that they would not be spent in the present economically wasteful manner. Many other advantages might be instanced, but we take it that they are obvious. Those that would accrue to the sick themselves would be incalculably great.

Our present hospital system is loose, disorganized, wasteful and medieval. It is a caricature of what a hospital system ought to be in a civilized country. To men with even elementary ideas about efficiency it must appear wanting; to men acquainted with the proper management of large affairs it must appear grotesque; to men with vision of what is possible it appears in its true light—a social crime.

That this state of affairs exists is chargeable largely to what is commonly called professional altruism, as revealed chiefly in this matter of free medical service. We think professional cretinism a better term. Not only does it account for the lack of proper hospital organization, but it accounts in large measure for the fall of the profession in public esteem—but that is another story.

We are unable to suggest the means by which large doses of a social thyroid extract might be administered to our sick friends. The prognosis is bad.

Two Men: A Differential Diagnosis.

It would seem difficult in these piping times of suffrage and feminism to discuss the woman question in the manner, say, of Dr. Simon Baruch, without danger of gross misunderstanding and of either stupid or malicious criticism. What Dr. Baruch has said is true, but in no wise has it justified the notion that he regards women as mentally inferior to men. Because it is pointed out that no woman has achieved anything epoch-making in medicine does not mean that we have no faith that the future will see mighty things done by our professional sisters. Women are now an integral part of the profession. We look to see them occupying professorial chairs shortly of the first rank, as well as holding staff appointments in the most important hospitals. Then will surely come triumphs for them as great as any of the past.

Dr. Baruch in no sense stands with that lonesome gentleman who recently assigned the medical women a place as medico-social housekeepers, to have and to hold forever.

Is Genius Only the Normal?

The suggestion made in our columns last month that we cease to think and speak of genius, or unusual ability of any kind, as abnormal, has excited some interest and met with partial approval. It may be remembered that we dissented from what we considered the arbitrary and invalid classification of the commonplace man as normal, the genius as abnormal. We protested against the assumption that the man with a really worth while brain is necessarily abnormal and tried to show that the mediocre mind is really a subnormal mind. Our conception of the normal mind should be one of large potentiality. Not to possess creative power or special ability of some sort is morbid.

The world is so thoroughly persuaded that genius is abnormal that we realize fully the hopelessness of attempting to change the point of view of those who would insist that their own inferiority is somehow proof of their normality. It is really a defensive mechanism on their part so to insist, and they cannot well be blamed for declining to abjure their smug contentment and give up their place in the sun to their betters. All sorts of advantages are derived from the perpetuation of this bourgeois idea as to what constitutes normality. Its everlasting imposition on society is a crime against reason and a negation of civilization. The people of the Republic of Andorra, where it is the rule to regard as unbalanced men who try to rise above mediocrity, are only a degree less stupid than ourselves.

The gods of the ancients were normal men occupying their proper place in society. Now the order is reversed and the gods have been dethroned and debased. Not that our worth while men do not occasionally at-

tain place and power and honor by reason of their great achievements—they do, but are labeled abnormal. They are "denounced" as genuises. "In many many instances it is no longer a question as to whether a certain genius was insane or not. The modern query is 'From what form of insanity did he suffer?'"—(*Medical Record*, June 15, 1912).

Our conception of the commonplace mind as the normal mind, as typifying what mankind ought to be mentally, is a significant and deplorable phenomenon and accounts for much of our social chaos and intellectual confusion.

Ability to conform, without departure at any point, to our economic and social order, which is known to be rotten, and complete amenability to the absurd educational *standards* in vogue, are considered good evidence of normality when, as a matter of fact, they merely establish indubitable proof of crass defectiveness. It is not possible thoroughly to standardize worth while minds.

War and the war spirit are with us because they are the natural and inevitable expressions of the commonplace mind triumphant. Our political idiocies are a reflex of group feeble-mindedness.

To be normal you must be coarse enough in nervous and mental fibre, and morally and emotionally obtuse enough, that is to say, degenerate enough, to withstand our present social and economic life without breaking. A normal nervous and mental organization would hardly be able to withstand it, hence the large amount of pathology noted in geniuses. Why should a watch not break when subjected to lawn mower usage?

It is the abnormal mediocrity of the masses of today that effectually precludes progress even to a point far short of the non-governmental society visioned by such thinkers as Edward Carpenter. Even social justice of an elementary sort is attained with difficulty because of the fact that you cannot make a golden age out of a leaden people. Community healthfulness remains an interesting hypothesis.

That genius is abnormal is essentially a vulgar view fostered assiduously by every intellectual plebeian. It is a view that ought to be shattered. The medical thought, teaching and practice of our professional bourgeoisie have been largely responsible for its origin and continuance.

Adding to Pathology.

That additional lesions are caused at times by certain diagnostic and therapeutic procedures is undoubtedly true. That the deep urethra suffers much from tinkerings is beyond dispute. We fancy that turbidity following one or more spinal punctures is sometimes open to more than one construction. There is sometimes more than an initial pneumonia at fault in the case of empyema following upon exploratory pleural puncture. The clinical thermometer is not innocent of some infections. Intrauterine, Eustachian and intravenous manipulations are fraught with danger. With the greatest care and every precaution the possibility of adding to already existing mischief is apparent. The record of the *x-ray* includes some unfortunate incidents. As for drugs, the less said the better.

We must never forget the injunction of Hippocrates to do no harm in any circumstances. Many men seem to have a morbid fear of being thought neglectful unless they meddle with everything that comes along. The variety of measures instituted in the treatment of some patients is nothing short of the absurd. This is bad enough, but when those measures involve dangers that are not actually warranted, well, we are departing from the injunction of Hippocrates. We rest on this quotation, because Hippocrates is a better master of parliamentary expression than are we.

The Nature of the Neurotic.

Dr. Philip Kilroy, in the *Boston Medical and Surgical Journal* of October 14, 1915, declares that concealed in all the mass of verbiage in which the medical profession attempts to define the nature of the neurotic is the fundamental fact, long recognized, he says, by non-rainbow chasers, that the neurotic is just a plain damn fool, of varying degree, sometimes permanently, sometimes temporarily, unable to control or withstand the multiple stimuli of life, be they endogenous or exogenous.

Passing over Dr. Kilroy's incidental verbiage, to which, like the rest of us, he seems obliged to resort when defining the nature of the neurotic, and coming down to brass tacks, in other words, the damn fool proposition, we do not think that his solution is sound. We have known Secretaries of State and Secretaries of the Navy who were not a bit neurotic, but who nevertheless were damn fools. We are sure, too, that we know neurotics who are not damn fools in any sense. Among famous neurotics of the past many instances could be cited. Rousseau was neurotic, if ever there was a neurotic, but nobody has ever accused him of having been a damn fool. He has been accused of everything but that by critics, traducers, friends and the classes who have suffered or profited through his genius. Dean Swift was neurotic, but if to possess his powers is to be a damn fool we should gladly embrace the conditions.

Dr. Kilroy is not a neurotic, but he has said something which seems foolish to us.

"The Magic Panacea of Eugenics."

Boris Sidis has little or no use for the heredity doctrines of the eugenists. Suppose that the family history of defectives shows ancestral degeneration. What of it? Isn't there ancestral degeneration in the case of most people, normal and defective alike? Now if the people of talent and genius are the best representatives of the human race, and if degeneration is present in their family histories, and if similar degeneration is present in the family histories of the worst representatives of the race, then we have a *reductio ad absurdum* in the conclusions of the eugenists, for if degeneration is to be found in the case of most people we can afford to take the view of Sidis and minimize its importance or even ignore it. Sidis insists that the formation of psychopathic neurosis is not hereditary, but acquired. Neurosis is due to faulty training, harmful experience in early child life, bad hygiene and similar factors. It is childish to put the blame on ancestors. It is vicious conditions of life that affect disastrously the nervous and mental growth of the young—the filthy slums, improper training and education, and the industrial Moloch. It is the social order that is chiefly at fault, not ancestral degeneration. "The magic panacea of eugenics" is a sad delusion.

When hematuria comes on without being evidently provoked, we may generally surmise that the lesion giving rise to it is a serious one, although we may not be able to judge its site. In advanced malignant disease, and in soft papilloma at the neck of the bladder, the presence of blood is generally very persistent, without intervals, and of long duration, so that the patient may become very anemic from loss of blood.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

The Origin and Early History of Hospitals.

The germ of the hospital idea is found in the ancient Babylonian custom of bringing the sick into the market place for consultation. So also is it found in the Iatreia and Asclepeia of the Greeks and the Romans. The Egyptians held clinics in the temples, like the Greeks. In 300 B. C. a hospital was established in Ulster, Ireland, by the Princess Macha. In India, the Buddhist king Azoka (250 B. C.) established a hospital for men and animals.

Patients spent the night in the temple of Æsculapius at Epidaurus (incubatio) in the hope of receiving directions from the god through dreams which the priests interpreted. Lay physicians (Æsculapiades) conducted dispensaries in which the poor received treatment.

The Romans, in their treatment of the sick, adopted many Greek usages. A temple to Æsculapius was on the island in the Tiber (290 B. C.) where now stand the church and monastery of Saint Bartholomew, in which the same rites were observed as among the Greeks. Slaves and soldiers were cared for in valetudinaria attached to the estates of the wealthier Romans.

The first Christian hospitals were founded in the East. In the West, the earliest foundation was that of Fabiola at Rome about A. D. 400. Others were soon founded in Rome by the Popes. With the conversion of Constantine and the cessation of persecution the Christian world began to see the founding of many hospitals. Until the time of Constantine the Christian bishops acted the dual part of physician and priest. But during the reign of Constantine it is said that Saint Zoticus built a hospital at Constantinople. Saint Ephraem took care of 300 sufferers from the plague at Edessa, and so might be said to have founded a special hospital of 300 beds. Saint Basil at Cæsarea in Cappadocia (A. D. 369) founded a hospital which took on the dimensions of a city with its regular streets, buildings for different classes of patients, dwellings for physicians and nurses, workshops and industrial schools. Other hospitals followed in Alexandria, Ephesus, etc.

We have seen that hospitals were established in Ireland and India before the Christian era, but ancient Persia and Arabia also had hospitals supported by their kings and rulers. There were hospitals in pre-Columbian Mexico. In the early Jewish period a house for the reception of the sick was called Beth Holem. Such an institution was Beth Saida, mentioned in the New Testament. These hospitals seem to have been wooden huts. In ancient Egypt hospitals were unknown, the sick being treated at home or in temples. According to Plato, the Greeks maintained shelter houses for the sick in various parts of the country, supplied with attendants. In the period of Trajan there were endowed hospitals, according to a tablet discovered near Piacenza. This was during the Christian era, but long before Saint Zoticus established his hospital in the reign of Constantine. The Roman senator Antoninus erected two institutions (A. D. 170) one for the dying and the other for lying-in women. It is hardly likely that the Christian influence had anything to do with these early Roman activities. It is said, however, that Julian the Apostate, after the Christian influence had been deeply felt, provided out of the public revenues for a xenodochium in each city, to rival the philanthropic work of the Christians who cared for the pagans as well as for their own. Valens, representing in the east the Christian emperor Valentinian, founded a hospital in Cæsarea between A. D. 370 and 380.

It would seem that Christian influence had little or nothing to do with the founding of certain other hospitals, such as that at Damascus, built by the Caliph El Welid in A. D. 707, or that at Misr in Egypt, in A. D. 597, or that at Cairo in A. D. 874. Two hospitals were established at Bagdad in A. D. 918, and two more in A. D. 925 and 977. In A. D. 1160 there were sixty dispensaries and infirmaries in Bagdad. The dispensary evil is not wholly modern, it would seem.

At Cairo the Al-Mansur Hospital had isolation wards, separate wards for different classes of cases, separate wards for women and convalescents, lecture rooms, a large library, out-patient clinics, diet kitchens, an orphan asylum and a chapel. Soft music and accomplished tale-telling were used as therapeutic aids, and enough money was given to patients upon discharge to support them until the completion of convalescence. In the last provision we find the germ of our modern social service.

The *hospice* of the early centuries of Christianity was a shelter for the sick, the poor, the orphans, the old, travelers, and the needy of every kind. The fourteenth statute of the so-called Fourth Council of Carthage (*circa* A. D. 436) enjoined upon the bishops to have hospices in connection with their churches. In the course of time the term hospice began to be applied only to institutions in which travelers were harbored. The institutions for the care of lepers were called "spitals" or hospitia.

In our day, the terms asylum, home or college have largely taken the place of "hospital" in its old sense of custodial or teaching institution caring for foundlings and orphans. So also with institutions for the aged and indigent, otherwise alms-houses. Yet a number of institutions in England retain the old name in more or less of the old sense, as Christ's Hospital in London, Heriot's Hospital, Donaldson's Hospital, Edinburgh Hospital, etc.

During the Crusades many hospitals were built and there arose a special class, the Hospitallers, or knights, whose duty it was to take care of the sick. The present orders of Sisters of Charity, Sisters of Mercy, and allied societies had a somewhat similar origin.

The Hospitaller's vow to devote himself to works of mercy and the care of the sick in hospitals was usually superadded to the ordinary vows of poverty, chastity and obedience commanded by Saint Augustine. One of the earliest recorded instances of such a brotherhood is the Order of Madonna della Scala, in Italy, in the ninth century. The Knights of Saint John of Jerusalem, as also the Teutonic Knights, were originally Hospitallers.

The Teutonic Knights of Saint Mary's Hospital at Jerusalem (for pilgrims from Germany) originated in a brotherhood formed by German knights in 1190, during the siege of Acre by the Crusaders, and was recognized by Pope Clement III. in 1191. In 1198 this association was changed into an order of knighthood for political reasons and distinguished itself by subjugating and Christianizing Russia with fire and sword. Napoleon abolished the order in 1809, but it was revised as an Imperial Austrian order in 1834, and is now a purely hospital order.

The Knights of Saint John of Jerusalem were another religious order known also as the Hospitallers, Knights of the Hospital, Knights of Rhodes and

Knights of Malta. A great antiquity is claimed for this order, but its origin is obscure. One or more of the hospices which were established in the Holy Land by Pope Gregory the Great, in the sixth century, and cared for by Charles the Great, may have existed until the time of the First Crusade and may thus have given rise to this order. The special hospital at Jerusalem, from which it took its name, was either founded or restored by merchants from Amalfi in 1070 or earlier. For some years the brethren were under the rule of Saint Benedict (later that of Saint Augustine) and were engaged strictly in hospital duties. After the capture of Jerusalem by the Crusaders, in 1099, a hospital in honor of Saint John the Baptist was founded in Jerusalem and became the cradle of the later order. The earliest authentic documents which can be dated belong to the years 1099 and 1100. This hospital brotherhood was changed into a military order by Raymond de Puy, who ruled as master until 1158. After a long and eventful military history we find the members, in 1879, re-entering hospital service under the Convention of Geneva. The seal of the order has always represented the brethren attending a sick person. The Hospitaller Sisters of Saint John of Jerusalem established a hospital early in the twelfth century at Jerusalem for pilgrims (Hospital of Saint Mary Magdalen). Other sisterhoods active in hospital work were the Hospitaller Sisters of the Teutonic Order (13th cent.), the Hospitaller Sisters of the Holy Ghost (12th cent.), the Hospitallers of Loches (1621), and the Hospitallers of Saint Joseph (1636).

The hospital of the Knights of Saint John of Jerusalem to which we have alluded had five physicians and three surgeons and is said to have cared for two thousand patients in 1150. It was located near the Church of the Holy Sepulchre.

With the establishment of the schools of learning, and more particularly with the development of the study of medicine, many of the hospitals formed departments in the universities, and the university towns developed large and important hospital facilities. Bologna and the Italian towns led the way. Paris and the schools of France followed, and in England and Scotland the hospitals of London and Edinburgh were great medical schools. Thus Saint Thomas's, of London, was established in 1553; Saint Bartholomew's in 1546, where, in 1609, Harvey, who discovered the real nature of the circulation, was physician, and Bethlehem in 1547. One of the earliest of our so-called modern hospitals was the Hôtel-Dieu of Paris, which is supposed to have been founded in the seventh century. The rule of Saint Augustine was followed at this hospital, the inmates being vowed to the service of the sick and poor. But the first hospital established in France dates from the sixth century (that of King Childebert, at Lyons). A great hospital in Milan opened in the fifteenth century. Before the Reformation there were seventy-seven hospitals in Scotland.

Saint Hildegard, a German nun, called the Sibyl of the Rhine, friend of Saint Bernard of Clairvaux, at her abbey at Bingen treated the sick of all Germany and Gaul. She wrote fourteen medical books, the "Liber Simplicis Medicinæ" and "Liber Compositæ Medicinæ" ("Hildegardis Curæ et Causæ").

During the Middle Ages Charlemagne restored the hospitals, which had fallen into decay under Charles Martel. He ordered that a hospital should be attached to each cathedral and monastery. They declined again after Charlemagne until the tenth century, when the monasteries of the Benedictines and Cistercians became a dominant factor in hospital work (eleemosynaria). The duties of the eleemosynarius included every sort of service that the patient could require. He was obliged to seek out the sick and needy in the neighborhood, and so each monastery became a community centre of hospital social service of the most thorough-going sort.

After the Crusades the monastic orders were largely in control of the hospitals. In Italy there was a strong tendency toward municipalization of the hospitals, though this did not mean secularization in the modern sense. Under the sway of these orders abuses crept in. The Hôtel-Dieu had to be taken over in 1505.

The hospitals of the United States were founded largerly on English models, although the influence of the French school was not absent in the early history of this country. It seems probable that the first hospital founded in the United States was the Pennsylvania Hospital, although there were earlier institutions in Canada and Mexico. Efforts were set on foot as early as 1709 to establish a hospital in Philadelphia. In 1730-31 the city almshouse was founded, and did medical work; but it was not until 1750-51 that the Pennsylvania Hospital first had its actual birth. Joshua Crosby was the first president of the board of managers, and Benjamin Franklin the first clerk. The New York Hospital was the second hospital of importance. Its charter was granted in 1771.

That Catholic Christianity was the chief factor in the development of the hospital, which embodies one of its basic principles, is a glorious truth.

Hahnemann's One Experimental "Proof."

Our little article on Hahnemann's One Experimental "Proof," in the August Miscellany, brought out an interesting rejoinder from Professor Coleman, of the New York Homœpathic Medical College, which our readers found in the November issue.

Nowhere in Professor Coleman's article is there a hint that he believes the efficacy of quinine to be due to the known fact that it destroys the plasmodia of malaria. If we read his article aright, quinine and certain other agents used by homœopathic practitioners in the treatment of intermittents are believed by him to cure malaria on the homœopathic principle of similia and not because they destroy the plasmodia.

Does Professor Coleman, in this year of grace, take such a position seriously, and does he really wish to be understood in the foregoing sense by the medical profession?

Sero-Diagnosis of Tuberculosis.

E. Dubains and F. Jupille find that Besredka's tuberculin fixes complement in presence of the serum of tuberculous patients, in almost all forms of the disease. The reaction corresponds to lesions in process of involution, or which had presented previously a certain degree of activity. It is not sensibly influenced by intercurrent affections. When compared with the cutireaction it possesses great clinical value, and verifies the diagnosis of tuberculosis even though the clinical signs are absent or doubtful.—(*Ann. de l'Institut Pasteur*, April, 1915.)

In early renal tuberculosis hematuria is seldom severe or protracted, is frequently absent for long intervals, is not increased by exercise or relieved by rest, and on standing the corpuscles and coloring matter are not completely precipitated from the urine. The urine is acid, low in specific gravity, and deposits minute quantities of pus cells which fall to the bottom of the glass.

The American Association of Clinical Research

JAMES KRAUSS, M. D., Permanent Secretary and Editor.

GUNSHOT WOUND OF THE TEMPLE.*

G. W. MACKENZIE, M. D.,
Philadelphia, Pa.

This case is presented not because it is at all uncommon but to show the tendency for favorable recovery in a certain class of gunshot wounds of the temple if promptly operated. Keen, in referring to gunshot wounds of the temple, claims that it is notorious that suicides often fail to accomplish their purpose. The would-be suicide believes the temporal region to be a

FIG. I.

particularly vulnerable spot. If the weapon is pointed properly he is generally successful in his attempt at suicide. Occasionally it happens that the weapon is pointed too far forward and downward when the bullet escapes the brain and passes through the orbit cutting both optic nerves resulting in recovery to life but with permanent blindness. One such case was exhibited regularly to the students in Schnabel's clinic in Vienna several years ago. The case to be reported corresponds in a measure to the Vienna case and the one illustrated in Keen's Surgery, 1908, Vol. III, page 79.

The patient, C. G., male, aged 30 years, was admitted to the West Philadelphia Homeopathic Hospital, April 13, 1914, at 6.30 p. m., with history of having shot himself. He was bleeding from the nose and right eye and perfectly conscious.

Present Condition—Cannot open right eye (Fig. I) because the surrounding tissue is too edematous. Patient says he cannot see the light with either eye. Left pupil large, dilated and non-reactive.

Ophthalmoscopic Examination—*O. S.* Red reflex visible with a plus 4 at 8 inches, but with plus 10 at close range, hemorrhage in vitreous was visible. Here and there the retina was detached and floating. *O. D.* impossible to examine because of the enormous edema of the tissues about the eye.

Nasal examination showed the septum to be deviated to the right. Clot of blood in olfactory fissure.

Two Roentgenograms, one taken antero-posteriorly (Fig. II) and the other laterally (Fig. III) were made by Dr. William Pearce which showed the bullet to have taken a transverse and slightly downward course from a point about one inch above the midway point between the outer angle of the orbit and external auditory meatus on the right side to the outer angle of the left orbit and 2½ inches posterior to the shadow corresponding to the articulation of the nasal and frontal bones. The antero-posterior picture showed that the bullet was probably imbedded in the outer wall of the orbit.

Operation was performed the evening of the same day. Our first effort was to extract the bullet from the left orbit.

A curved incision was made along the margin of the orbit from above downward, comprising the upper, outer and lower one-third of the orbital rim, The incision was about 5 cm. long and was made down to the bone. From the upper and lower extremity of the incision two parallel horizontal incisions about 4 cm. long were made in a backward direction. The soft parts were separated from the underlying bone. With a chisel applied above and below the external anterior bony wall of the orbit was separated in one piece. In some respects the operation was similar to Kroenlein's operation for the removal of orbital tumors but more radical. The deeper soft parts including the temporal muscles were separated from the external wall of the orbit. The remaining portion of the outer wall of the orbit was removed with biting forceps posteriorly to the point of location of the bullet suggested by the Roentgenograms.

Palpation with the finger revealed a fragment of bone near the orbital floor and externally, which suggested the presence of the bullet. This misled us and

FIG. II.

caused a loss of several minutes. In palpating behind the eyeball in a median direction the bullet was located in the orbital tissue about one-half inch behind the posterior pole of the eyeball; after which it was extracted with very little difficulty. Manipulation with the uterine sound showed a through and through opening from the point where the bullet was extracted to the point where it had entered. Furthermore, it was a perfectly straight hole.

*Read before the American Association of Clinical Research, at its seventh annual meeting in Philadelphia, on Sept. 25, 1915.

Into this operative opening on the left side a piece of iodoform gauze was introduced about one inch to serve as a temporary dressing and to keep tab on the opening. A loose outer dressing was applied and the head turned on the left side, and operation begun on

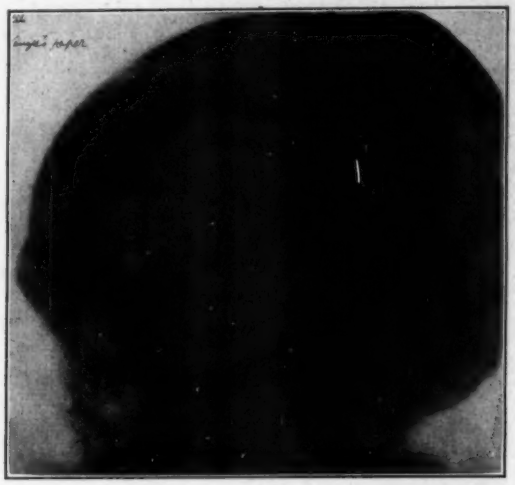

FIG. III.

the right side. The right side was prepared in a similar manner to that of the left side. With a No. X chisel the opening in skull was enlarged and it was found that the bullet had cut the dura for an area equal to the size of a cent at the anterior external angle of the anterior lobe through which issued about a teaspoonful of soft brain substance. The wound opening was enlarged downward into the orbit and the major portion of the outer orbital wall was removed with chisel and bone cutting forceps. A few small clots were removed. The roof of the orbit was more or less exposed and examined with malleable probe but at no place could a fracture or loss of substance be detected. The frontal sinus was opened and probed, the ball having passed below the sinus.

The patient's head was then turned on the table face upward. A long esophageal forceps was then passed into the opening on the left side through the head and out on the right. To this was fastened a strong ligature and the ligature again fastened to 2-inch iodoform gauze. The forceps was then withdrawn bringing with it the ligature and the gauze. Five inches of gauze was left free on each side and the ends secured with safety pins. Thus was obtained a through and through drainage. The outer flaps were tacked here and there with sutures and moist iodoform gauze was packed under the edges for drainage, outer plain gauze dressings and bandage.

April 15, '14. Afternoon report—Temp. 98; Pulse 88; Resp. 24. Has slight pain in eyes, sore throat and hungry.

April 16, '14. Temp. 98.6; pulse 96; respiration 24. Sleeps well; takes lots of nourishment; has no complaints.

April 17, '14. Temperature 100.4 axilla; pulse 60; respiration 20. Did not sleep well.

April 20, '14. Redressing; sewed piece of iodoform gauze to packing and drew old piece out replacing with new one. Wound looked good. Ecchymosis and edema of right eye is less pronounced and lids can be opened sufficiently to see the cornea. Washed both eyes with boracic acid solution. Redressed and bandaged.

April 22, '14. Patient slept in naps and complains of soreness in head and pressure over eyes hurts them. Temperature by mouth 98.6; pulse 68; respiration 20.

April 23, '14. Redressed and repacked, drawing clean iodoform gauze through and through.

April 24, '14. Patient passed a restless night; was delirious; complains of pain through head and wound. Temperature this A. M., axilla, 100.2; pulse 68; respiration 20. Dr. Hillegas removed right eye.

Apjril 28, '14. Redressing made. Upper wound left side cleaner and closing; considerable pus from wounds on right side but after cleansing healthy granulations seen. Clean through and through iodoform drainage made through lower wounds. Part of the iodoform packing removed from right eye. Dressings and bandage. Complains of considerable pain; left eye feels as though something was in it.

April 30, '14. Redressed. Drew packing through and through. Wounds cleaner, healthy looking and granulating fast. Patient is doing well but complains of pain in ears and sensation of something in left eye.

June 12, '14. Upper wounds granulating and almost healed. Patient feels fairly good. Has itching and burning sensation on right eyelids and felt better when Dr. Esposito placed cotton on lids. Wounds and through and through gauze drainage looks clean. Cocainized nose but it was impossible to see drainage and therefore the through and through drainage was removed and packed from each side separately. Flushed eyes with boric acid solution and argyrol. Used oint. to lids; bandage.

June 15, '14. Wounds clean. Ag. NO_3 stick to granulations; argyrol to eyes; oint. to lids. B. A. wet pack to eyes. Iodoform gauze to wounds each side. Bandage.

I am responding to your request that I write you in the course of a few months

SPECIMEN OF PATIENT'S WRITING SINCE RECOVERY.

June 16, '14. Wounds clean. Patient feels better. Has no head pains. Packed both openings with iodoform gauze. Argyrol in both eyes. B. A. packs. Sterile gauze and bandage.

June 17, '14. Dressings same as yesterday.

June 18, '14. Wounds clean. Patient feels good. Boracic acid to both eyes, also argyrol. Wet packs.

Iodoform gauze packing in both wounds; dressing and bandage.

June 19, '14. Patient felt pressure from bandage (too tight). Left conjunctiva quite red and eye feels sensitive. Washed both eyes with boracic acid solution and used argyrol. Packed both wounds with iodoform gauze and put small dressing with adhesive on leaving eyes free that oxycyan. and argyrol drops may be used at home t. i. d.

June 20, '14. Wounds cleaned. Left eye still red; upper lid edematous. Cleaned with boracic acid solution. Used argyrol. Iodoform gauze in wounds. Small dressings. Oxycy. and argyrol treatment at home t. i. d.

June 22, '14. Less congestion in left eye but lid is still edematous. Temperature normal. Patient does not feel as much pain. Wounds clean. Same treatment and dressing.

June 23, '14. Wounds clean and healing. Considerable secretion from right eye cavity. Left eye less congested and patient feels good. Same treatment.

June 24, '14. Wounds clean and healing fast. Same condition as yesterday and same treatment + Ag. NO_3.

June 25, '14. Both eyes and wounds look good. Same treatment.

June 26, '14. Both incision wounds healed over. Small drainage wound on left nearly closed. Right side smaller. Eyes much better. Conjunctiva of left eye beginning to show up white. Oxycy. Same treatment.

June 27, '14. Incision wound on right side healed. Small spicule of bone from opening on left side of through and through drainage. Caustic silver to edges of wound. Otherwise same treatment.

June 29, '14. Patient feels good except a slight amount of pain when touching wound on left side. Treatment same. Use only B. A. in right eye.

June 30, '14. Wounds clean. Treatment same.

July 1, '14. Wounds clean. Same treatment.

July 2, '14. Both wounds clean and smaller. Right eye has less secretion. Left eye looks better. Oxycy. in both, and continue B. A. in right and argyrol and oxycy. alternately t. i. d. in left. Dressing same.

July 3, '14. Same condition; same treatment.

July 6, '14. Eyes look better. Opening of left wound granulated over; touched with Ag. NO. Right wound smaller; packed with iodoform gauze.

July 7, '14. Secretion on lids of right eye but cavity looks clean. Redness nearly disappeared from left eye but same secretion on lid edges. Scab on left wound; right wound clean. Same treatment.

July 8, '14. Same condition; same treatment.

July 9, '14. Wife says there is more secretion in right eye but it is watery; otherwise condition is the same. With probe tried to see if there was a fist. in right cavity, but could not find any.

July 10, '14. Both eyes look good. Lashes on right lids not drawn in so much. Right wound clean and much smaller. Left wound healing over.

July 11, '14. Same treatment. Patient feels good.

July 13, '14. Both eyes look better. No secretion in left and only slight amount in right. Left granulation touched with silver. Packing is very small in right wound.

July 14, '14. Much better; same treatment.

July 15, '14. Wound clean; left dressing off of left side.

July 16, '14. Left wound healed; less secretion in eyes and what is present is more watery. Very small piece of iodoform gauze in right wound.

July 17, '14. Less secretion in eyes. Right wound almost closed.

July 18, '14. Same condition; same treatment.

July 20, '14 Same condition; some treatment.

July 21, '14. Right wound almost closed. Right eye had considerable secretion to-day. Treatment same.

July 23, '14. Right wound entirely healed. Less secretion in eyes.

July 25, '14. Has artificial eye in right socket; lashes now held in position. Less secretion and fewer tears. Wounds O. K.

July 27, '14. Artificial eye looks good.

THE CAUSE AND TREATMENT OF PURITUS ANI, VULVAE AND SCROTI: SOME TYPICAL CASES.*

ORLANDO R. VON BONNEWITZ, Ph. C. M. D.
PROFESSOR RECTAL SURGERY AND CHIEF OF RECTAL CLINIC N. Y. H. M. C. AND FLOWER HOSPITAL.
New York City.

In presenting a paper before this association whose business it is to find out things, the writer feels a few facts upon a disease, the etiology of which is so obscure that hardly two investigators agree either as to the cause or treatment, may be of sufficient import to engage your attention.

Occasionally a case of pruritus is relieved, temporarily at least, of the distressing symptoms, and one is buoyed up with hope, only to fail completely in the very next case.

The theory of the cause of pruritus, as presented to you today has stood the test in 162 cases. By this I mean that treatment based upon this theory, has cured that number of cases.

By pruritus, involving the various parts, as spoken of in the following cases, we mean TRUE pruritus, and not the transitory itching of these parts, due to constitutional discrasia, gout, lithemia, worms or other intestinal irritations. True pruritus ani, always has the thickened skin about the anus, either in deep wrinkles, or leathery and soggy white. Occasionally we find a case in which the hair follicle has not been destroyed, but usually the parts are quite bald, and the integument is in cracks and fissures. Besides these symptoms, which are classical ones, in pruritus ani, pruritus vulvae, or scroti, the intense itching is always worse at night. Another thing I have noticed in every severe case: the mucous membrane is found in folds in the ampulla of the rectum, as revealed by the proctoscope, and does not balloon as in a case where pruritus is not present.

These then are the cardinal symptoms of real pruritus ani.

In 1908 I determined to find out, if possible, something definite about this malady, which was practically incurable, according to the literature available at that time. Outside of Murray's theory of streptococcus fecalis bacilus, as the cause, we have nothing definite to tie to. Murray's treatment by autogenous vaccines, has not given me the results he claims, and other proctologists have had the same experience. Therefore, I believe his theory to be open to doubt.

In 1910 I presented a paper before the State Society meeting at Rochester, N. Y., outlining my treatment, and presenting some cases cured. Since then I have treated nearly 200 cases with ninety per cent. of cures, some of which I present today for your consideration.

Many proctologists have recorded the fact that

*Read before the Seventh Annual meeting of the American Association of Clinical Research, on Sept. 25, 1915, at Philadelphia, Pa.

every case of pruritus examined presented a chronic procitis. The severity of the protitis denoted the severity of the itching. The mucous membrane in severe cases greatly resembled in appearance, the membrane we see in chronic conjunctivitis.

This led to the investigation of proctitis as the probable cause, and the treatment based on this theory has proved satisfactory, as stated in the beginning.

Proctitis begins its work of destruction very early in life, and I believe with Jacobi and others, that the wearing of soiled diapers in babyhood, until fermentation has converted a harmless stool into an active irritant, marks the beginning of proctitis, and the direct cause of more diseases of the rectum in later life than we are willing to admit or believe. All of you have seen the baby with the sore buttocks, and told the mother to dust it with talcum. By doing this you are at least morally negligent.

Now, in later life, let us see just what takes place. We have a chronic proctitis secreting an ichorous mucus; this caustic discharge passes through the mucus membrane, dissolving the connective tissue which binds the mucosae to the muscular wall; and the membrane falls away from the wall, much as wall paper falls away from the wall by excessive dampness. This accounts for the mucous membrane appearing in folds.

This acrid fluid collects in quantity as it passes downward, gathering volume as it goes, producing the channels or canals we always find. When it reaches the constricted portion of the rectum, the sphincters, it is diverted in two ways. If it goes over the muscles it produces the deep rugae and sulci, so often present, or if diverted behind the sphincters it burrows in any direction, if toward the scrotum, that part will itch; if it invades the labia or goes backward through the posterior space, then they will also itch and crack open.

When the irritating mucus goes over the sphincter muscles and forms the tags and bags about the anus, the muscles cannot contract enough to prevent leakage, although to the examining finger the anus seems, and really is, very tight, but the wrinkles allow the mucus to escape, and anywhere it touches it irritates the integument and produces intense itching.

But this is not the only thing which happens, as in cases when the inflammatory product is diverted in its course. Then the anus remains tight but the discharge burrows around the anus in the fatty tissues, and may go in any direction.

This can be demonstrated by the patient scratching the part and producing this same irritating fluid, entirely away from the anus. I believe this comes directly through the skin.

Now how are we going to cure these sufferers? If my theory of cause is correct, it yet remains for us to prove the theory by curing the patient. The one thing which proves to me that the cause is about as I have stated, is the fact that I can cure them, and the other fellows cannot.

Naturally if proctitis is the cause, then the proctitis must be cured, and this is your first problem. I cure the proctitis by irrigating with very hot water, with an apparatus for the purpose which I will show you today (Fig. 1). This enables us to use four gallons of water, and take advantage of the secondary action of hot water, which you see produced in the case of the washerwoman's hands.

First they become red and then the hyperaemia is increased, but in half an hour they become white and puckered, the blood being driven out. This is the condition we wish to produce in the rectum, and a fountain syringe will not do this, but will produce the hyperaemic condition only, because if you use water hot enough to cure the proctitis, the anus will contract after the first quart of water and the introduction of more will be impossible. This you will notice, is taken care of by a half inch tube in my apparatus, which is kept in the rectum until the four gallon irrigation is finished.

FIG. I.

The constant use of this irrigator, once daily, will gradually cure the chronic inflammation and diminish the amount of acrid mucus which passes through the mucosae.

But this is not sufficient to relieve your patient, the old channels remain and must be eradicated by surgical means.

Therefore we have a surgical condition present, and the proper treatment is to open, drain and obliterate the channels. You here experience the first difficulty, the absence of reliable surface indications, for the initial incision. The object being to find as many channels from one incision as possible.

In this, as in any other work, experience counts for much, as I am now able to cure cases with much fwer outside openings, than when I began this work.

In some cases the color of the integument will guide you, in others a pimple, or sometimes the sinus is superficial enough to be detected by the finger.

After the parts are prepared as in any surgical operation, by means of a small syringe, fitted with a long hypodermic needle, inject, first, into the integument, then from this point into the deeper tissues, until the entire line of your incision has been anesthetized. Any local anesthetic will do, although I prefer betaeucaine one-eighth of one per cent.

The incision is made about two inches in length, depending upon the location, and carried down from an inch to two inches, keeping the bottom of the cut as long as the top. The opening is made, not at one cut but by degrees, taking care of the hemorrhage in the usual manner, by ligating any large vessels encountered.

Searching as you go, you will recognize the sinus by the color, being a deep mahogany, and the tissues very rotten. You can now trace out the channels, and irrigate with some alkaline solution.

You will be amazed at the quantity you can inject. I have frequently injected a pint. Where it all goes I am not able to say. The healing up or obliterating of these channels is easy, as they have a tendency to heal kindly, and with care do not become pustular, quite different to fistula.

Being able to inject so much water, with no return, suggested the use of bismuth solution, and then taking radiographs of the pelvis; this was done in some nine cases.

I have in mind a lady from Meriden, Conn., who

had passed some nine months in a noted sanitarium without relief, who was a confirmed invalid from headaches. Migraine was the invariable diagnosis, and she was sent home and given a hypodermic syringe and morphine to use as nothing would control the pain but repeated injections.

Upon examination I found the signs of channels, with a severe colo-proctitis. The long diseased mucosa had broken loose from the muscular wall and would invaginate at each effort to stool.

An opening was made at the side of the anus, and a channel found extending twelve inches up beside the rectum; this was widened, irrigated and healed nicely. Later another opening was made in the opposite side, but this channel was only four inches long.

The peculiar feature of this case was that there was only slight itching until several days after the operation, when the itching commenced and was very severe for one week, then disappearing permanently.

There have been no headaches, and the patient has gained thirty pounds in the last nine months.

Another interesting case of pruritus ani, and the most severe one I have ever encountered, was referred to me by Dr. Hamlin of New York, in March, 1911.

Mr. A. S R., aet. 45, bookkeeper, family history revealed nothing unusual, specific history denied, has suffered with fair amount of itching for 10 years, which has gradually increased in severity the past three years.

Is able to work only part of the time, but the itching is so intense must sit in hot water more than half of the night. Has lost 30 pounds in weight.

On examination, the skin about the anus for a distance of five inches was denuded and bloody, resembling raw beef. I could make out three channel openings, without operation, so they were irrigated and the raw area was packed with gauze and Argyrol solution. After these parts were healed two other channels were opened and healed. This work occupied the time to May 15, 1911, when he was started with the irrigator. The last examination was on June 2, 1915, when the irrigator had been stopped sixteen months, and there was no return. This I consider my banner case and my patient is equally pleased, having gained 43 pounds during this time.

Dr. Wm. Tod Helmuth referred to me, on May 10th, 1911, H. A. W., aet. 26, a student of Yale and a man of very fastidous habits, being a son of one of our "merchant princes" with the constant service of a valet. He had been under the care of several excellent physicians, including a very well-known proctologist, without relief, for six years.

The examination revealed the prolapsed membrane in deep folds, and the other classical symptoms of pruritus ani, but with an extension to the anterior raphe of the scrolum. The right side of the anus was the most troublesome and it was opened as described above, and healed. The relief was so great he would not have any further work done then and did not irrigate.

On June 4, 1913, there was a return on the left side and anterior raphe. These were treated in like manner, and he was instructed to commence irrigating, and kept it up for five months.

Examination on April 1, 1915. There had been no return and the proctitis had entirely subsided.

Dr. Seward referred to me on May 3, 1909, an Italian Prince, aet 50, with the usual history of itching, but in this case there was passage of blood at stool. Examination revealed a fissure in the posterior commisure.

This was thought to be the cause of the itching and discharge as the typical leathery, soggy-white skin was not marked.

Operating for the fissure relieved the pain and blood, but the itching continued.

Operation for this, and irrigation, cured the case one year afterwards.

There has been no return since then—1910. This case was very difficult to handle as all patients with too much money and too little sense are apt to be.

Another interesting case was sent to me by Dr. E. G. Tuttle, of New York.

Mr. R. S., aet 27, coal merchant, and a man of extraordinary exemplary habits.

Has complained of severe itching of anus for 1½ years, not as severe as the preceding cases, but quite annoying at night.

This was a typical case of early pruritus and operative measures with irrigating has cleared it all up.

This is the case I reported at the American Institute meeting, at Atlantic City, in a paper on cancer of the rectum, in which I found a small spot six inches up, that proved to be a very early carcinoma, and which I operated and apparently cured. I examine him twice a year for recurrence, but up to this time there has been none of either.

I report this and the other case with the fissure, because the majority of my cases of pruritus did *not* have other rectal diseases present.

Some authorities claim that pruritus comes from unclean habits or those who are compelled to sit all day.

In my experience this does not hold good, as I have never had a shoemaker, but two bookkeepers, no chauffeurs, and three men to one woman.

In over 200 cases I have seen there were 30% physicians, 10% were dentists and nearly all might be called the "highbrow" class.

I see very few cases of pruritus in my clinic at Flower Hospital. Not one in fifty, I should say.

Of course you must remember we are discussing true pruritus ani. I see many cases of itching due to other causes as I stated in the beginning, but true pruritus occurs more in men than in women and not at all in children.

I don't think it necessary to take up your time with reporting cases of pruritus vulvae or scroti as a separate condition, because they always are co-existent with the anal disease; in fact it is only an extension of the disease and must be treated in the same manner.

My records show forty-three doctors have been under my care the past year for pruritus ani, and this should insure a good discussion if I have succeeded in gaining your interest in the theory of proctitis as the cause of this distressing malady.

Broadway at 70th Street.

Stomatitis.

℞ Phenolis ..... ♏viij.
Sodii Bicarbonatis ..... ʒij.
Glycerini ..... ʒiv.
Aquam ..... ad ℥iv.
Misce. Fit mistura.

S. For use as a mouth-wash.—(*Canada Lancet*, March, 1915.)

With very few exceptions, *x*-ray therapy should only be recommended in women under 40 years of age.

Surgery

Epidemic Appendicitis.

E. Saxlund relates an epidemic of sixty-five cases of appendicitis of a mild type in Norway. The first case was in December, 1907, the last in August, 1910. There was no mortality. In the last three months of 1908 there were eighteen cases and eighteen in the first three months of 1909. Sixty-two of the patients came from a district of 2,100 people; 44 of the patients were from 15 to 30; 5 were under 15, and 5 were over 45. Six were males, 59 females, and 44 of the 59 were unmarried women. The epidemic was in the nature of local outbreaks. The 18 cases seen in the last quarter of 1908 were all near a brackish lake, and two months later there were 10 more cases in this small area. No evidence pointing to infection by food or water could be obtained. The affection was mildly infectious; in nine instances 2 people from a single household were ill and in one 3, but generally at an interval of several months. In one region there were 30 patients among 81 neighbors living close together; in 10 out of 30 houses more than one case of appendicitis occurred. The nature of the infecting agent remained unsolved by microscopic and bacteriological examination of 12 appendices removed and submitted to research. Saxlund believes that some specific virus was the causative agent.—(*Tidss f. d. Norske Laegef. xxxv.*, 1915.)

Treatment of Severe Pruritus Ani.

P. L. Mummery, of London, believes pruritus ani is a condition set up by a local cause. It has been for a long time been recognized that some definite pathological lesion of the affected skin is present in old-standing cases of pruritus ani, and various theories have been propounded as to the nature of this change. Thus, Unna suggested that it was due to a difference in the osmotic pressures of the different layers of the skin. It seems much more probable, however, that it is in the nerve extremities themselves that we have to look for the lesion.

The earliest treatment which was based on this assumption was cauterization or excision of the skin in the affected area. The operation originally described by Sir Charles Ball in 1905 was designed on this assumption. The object of the operation is to divide all the nerves passing to the affected area of skin just before they reach the skin. Mummery has for the last ten years frequently performed this operation, or some modification of it, and the results obtained have convinced him that the lesion lies in the nerve endings; and he always advises its performance in cases where he has reason to believe that this change in the nerve endings has already occurred, and careful non-operative treatment has been given a good and sufficient trial.

There are several modifications of the original operation, but all have the same object—namely, division of the nerves before they reach the skin. One modification consists in making radiating incisions from the anus, through which the nerves can be cut. Other surgeons, again, advise the subcutaneous division with a tenotome. Personally he prefers the original incision described by Ball, or a modification of it in which a narrow bridge of skin is left on each side to prevent retraction of the flaps. Several surgeons have discarded this operation owing to frequent failures to cure the patient. He believes the cause of the failure has been that the nerves have not been completely divided. It is obvious that if the operation is to be a success all the nerves to the irritable area must be cut. As an immediate result there will be complete anesthesia of the whole of the affected area. The operation has not been successfully performed unless it is found on examining the patient the day after that there is absolute anesthesia over the whole of this area. Many of the sensory nerves passing to the edge of the anus come down from between the sphincters and pass parallel to the bowel wall and just beneath the mucous membrane. These nerves are easily missed unless the operation is performed very carefully. The operation looks very easy and simple on paper, but in practice it is far more difficult than it appears, for one has to be certain to divide all the nerves, and at the same time to avoid buttonholing the skin or seriously damaging the blood supply. The anesthesia prevents pain after the operation, and the relief from the irritation is immediate. The anesthesia is total for about ten to fourteen days. After this slight sensation begins rapidly to reappear in the skin, and sensation is generally normal in the affected area of skin within three or four weeks.—(*Brit. Med. Jour.*, p. 291, 1915.)

The American Society for the Study of Alcohol and Other Narcotics.

It will hold its forty-fifth annual meeting at Washington, D. C., December 15th and 16th, 1915.

This was the first society of medical men in the world, to take up the scientific study of alcohol and other narcotics. Its papers and transactions have been published in the *Journal of Inebriety*, and comprise the first scientific literature on this subject.

Thirty-one papers will be read at this meeting, by specialists, and distinguished scientific and medical men. These studies will be confined exclusively to the effects of alcohol on the body and brain, based on clinical and laboratory observations and experience.

The public are cordially invited to be present. Programmes can be had by addressing the secretary, Dr. T. D. Crothers, Hartford, Conn.

Been a Help.

Editor, THE MEDICAL TIMES:

THE MEDICAL TIMES has certainly been a help to me, for there are quite a number of its worthy contributing editors who are also great men at the college, and I not only have the pleasure of hearing them speak, but of seeing their lectures down in print each month in your valued paper.

Wishing you and THE MEDICAL TIMES best of success for the ensuing year, I beg to remain,

Respectfully yours,

(Signed) WILBUR H. MCEVOY, M. D.

Brooklyn, N. Y., November 2, 1915.

One of the Best Journals.

Editor, THE MEDICAL TIMES:

I can say for THE MEDICAL TIMES that it is one of the best journals that comes to my office, and many of the articles have been of assistance to me in my work.

With best wishes,

Most cordially yours,

WM. H. SWEETING, M. D.

Savannah, N. Y., November 2, 1915.

J. B. Oeaver (*Ann. Surg.*) says complete removal of the pancreas is homicidal, partial excision is difficult and but rarely indicated, and direct drainage can be accomplished only in very imperfect fashion at best.

Book Reviews

What the Mother of a Deaf Child Ought to Know. By John Dutton Wright. Founder and Principal of the Wright Oral School for the Deaf, New York City; Collaborator of "The Laryngoscope" and the "Volta Review"; Director of the American Association to Promote the Teaching of Speech to the Deaf; Author of "Educational Needs of the Deaf," for the Guidance of Physicians. New York: Frederick A. Stokes Company. 1915.

A very excellent lesson which Dr. Wright brings out in his little book should be brought to the attention of all parents of the deaf. "Even though the child be totally deaf from birth," he says, "he can nevertheless be taught to speak and understand when others speak to him. He can be given the same education that he would be capable of mastering if he could hear."

The book is well divided into chapters and makes easy reading. The author particularly dwells upon the development of residual hearing and the importance of learning to read the lips.

It is most important that the parents consider that they owe a certain duty towards their child and that his duty becomes all the stronger if the child is handicapped by deafness.

HAROLD HAYS.

The Practitioner's Visiting List for 1916.—Four styles: weekly, monthly, perpetual, sixty-patient. Pocket size; substantially bound in leather with flap, pocket, etc.; $1.25, *net*. Lea & Febiger, Publishers: Philadelphia and New York.

It affords a simple and complete system for keeping the records of daily practice. In addition to the ruled pages for daily calls and their notes, general memoranda, addresses, cash account, etc., it contains specially arranged spaces for data desired for permanent record such as births, deaths, etc. The value of such records is best appreciated by the physician who has been suddenly confronted by the necessity of producing such data after the lapse of years and in the absence of an orderly system for its preservation.

Calcylates—New Form of Salicylates.

Our readers are familiar with the fact that Salicylates in the usual forms have been very scarce for several months past, and also the prices in most cases have been prohibitive for their continued generous use; consequently, we invite special attention to Calcylates, originated and made only by The Drug Products Co., Inc., of New York City.

Calcylates consists of Calcium and Strontium Di-Salicylate. It is slowly decomposed in the alimentary canal with the liberation of acid salicylic, but because of the form in which it is presented, it may be administered continuously and indefinitely without gastric irritation, insuring maximum efficiency. It is superior to the ordinary Salicylates. The price of Calcylates is less than reliable manufacturers are asking for the other forms of Salicylates.

Calcylates is presented in Powder form, Capsules of 5 grains each, Pulvoids—pulverous tablets of 5 grains each, Pulvoids s.c. orange color Calcylates Compound, a combination of Calcylates and therapeutic agents especially indicated in articular, muscular and inflammatory rheumatism and Elixir Calcylates Compound.

Samples and formulae will be mailed free to the medical profession upon addressing the Drug Products Co., Pharmaceutical Chemists, 230-234 West 17th St., New York City.

Germicidal Effect of Lactic Acid in Milk.

P. G. Heinemann gives the results of several experiments as follows:

"Some acid-tolerant cells of bacillus coli may survive the presence of 0.6 per cent. lactic acid in milk.

"B. dysenteriæ B. typhosus, B, diptheriæ, B. paratyphosus B, and spirillum choleræ in these experiments were destroyed by the presence of 0.45 per cent. lactic acid. It is possible that strains of these bacteria exist which are able to resist a greater amount of lactic acid.

"Acid-tolerant strains of B. coli, D. dysenteriæ, B. typhosus, and B. paratyphosus B may multiply in the presence of quantities of lactic acid which are destructive to the majority of cells. The smaller the initial amount of lactic acid, the more likely is the growth of acid-tolerant strains. Consequently, the slower milk sours, the greater is the danger of pathogenic bacteria surviving.

The growth of the test bacteria is influenced to a marked degree by the amount of acid present. Up to a fairly definite amount of acid there is an increase in numbers, followed by a decrease, which becomes more pronounced as the amount of acid increases. The amount of acid may increase after the number of bacteria has commenced to decrease owing to the liberation of enzymes.

Acids other than lactic acid are frequently present in buttermilk. Buttermilk, therefore, should be looked upon with suspicion, especially if heavily polluted, unless prepared from pasteurized milk. Still the chances of buttermilk becoming a carrier of infection are much smaller than of raw sweet milk.

The presence of saprophytic bacteria in buttermilk may have some influence on pathogenic bacteria. Whether this influence is favorable or otherwise, is difficult to determine by present bacteriological methods.—(*Jour. Infect. Dis.*, March, 1915.)

Impetigo of the Scalp in Children.

Bonifas recommends a liberal application once a day of the following ointment:

℞ Iodoform ..... gr. xv.
Vaselini Acidi Borici ..... ʒij
Misce. Fiat unguentum.

The crusts soon become loosened and fall off; the hair then grows more thickly and strongly. In severe cases, the amount of boric vaseline should be reduced to one ounce and a half; in obstinate cases, the quantity of iodoform may be increased three- or four-fold, and the head must be washed very thoroughly with plenty of soap. Any lice present are killed at once. The objectionable smell may be masked by adding thymol in the proportion of 4 grs. to every 15 of iodoform used. This set causes a certain amount of smarting, but it soon passes off.—(*Journ. des Practiciens*, April 24, 1915.)

Incorrect Diagnosis of Actinomycosis.

V. Zachary Cope considers that actinomycosis is by no means so rare in man as is generally believed, and that many cases are diagnosed incorrectly. In the course of the ten years preceding 1912 only 136 cases were admitted into seven of the largest hospitals in London. Yet while the four largest together only reported a total of 50 cases, two of the smaller hospitals admitted respectively 61 and 21 patients subject to actinomycosis. Cope has detected this disease in 13 cases during the last three and a half years.—(*Brit. Jour. Surg.* Vol. III. No. 9.)

Typhoid Fever.

After noticing the early history of specific therapy of typhoid, F. P. Gay, Berkeley, Calif., says that in the last two or three years certain modifications have been used in the vaccines that lead us to hope that a true specific therapy may be possible. These are, first, the introduction of the intravenous injection, and, second, the use of sensitized vaccines. Since their work on the experimental prevention or cure of the typhoid carrier condition in rabbits, Drs. Claypole and Gay expressed their intention of transferring their results to the treatment of typhoid fever in human beings largely on the basis of the phenomena of specific hyperleukocytosis described by them. They found that the injection of typhoid bacilli in immunized rabbits or the injection of sensitized typhoid bacilli in normal rabbits gave rise to a hyperleukocytic crisis about eighteen hours afterwards, accompanied by a complete destruction of the injected living bacteria. They have been able only recently to carry out this intention. Owing to the courtesy of a number of physicians a chance has been given them to treat nineteen cases by the intravenous injection of the modified sensitized vaccine. In all cases the diagnosis was verified by blood culture and Widal reaction. In fourteen cases they were able to carry out the treatment as intended and in this limited number they produced an abortive cure in five, or 35 per cent., following one to three injections. The average day in these cases when a symptomatic cure was obtained was the nineteenth. In no case were uncomfortable symptoms produced by moderate doses. "The best dose, apparently, corresponds to about 300 million micro-organisms, and this dose, in an adult, seems to produce the characteristic reaction on which the abortive cure apparently depends. This reaction, as other recent observers have mentioned, consists in a chill within half an hour following the injection, accompanied by a rise in temperature of 1 or 2 degrees, followed by a fall in temperature to normal or subnormal in from twelve to twenty-four hours. We find that the initial rise in temperature is accompanied by leukopenia and the corresponding fall by hyperleukocytosis which, in some cases, has reached as high as from 20,000 to 40,000 per cubic millimeter. The increase is due almost entirely to polymorphonuclear leukocytes. The fall in temperature is invariably accompanied by symptomatic amelioration, and in successful cases the temperature either remains normal, or with a few fluctuations reaches a permanent normal in a day or two. We are not able to state, as yet, what relation the presence or degree of hyperleukocytosis may bear to the recovery." The positive Widal reaction in these cases, usually with high dilutions, suggests that the co-operation of the hyperleukocytosis and the presence of substances antagonistic to the typhoid bacilli is largely responsible for the cure.—(*J. A. M. A.*)

Newman says tuberculosis of the kidney, unless complicated by disease in the bladder, seldom gives rise to serious hemorrhage. The bleeding is usually slight, and is associated with polyuria and pyuria. Cystoscopic examination shows changes in the ureter orifice on the affected side, and the shoots are increased in number. There are frequent micturition, tenderness over the lumbar region increased on pressure, and occasionally severe pain from blocking of the ureter, associated with elevation of temperature and rigors. Swelling in the lumbar region, dull behind, resonant in front, may be irregular in form and variable in degree of resistance. Tuberculin reaction is positive, and tubercle bacilli are in the urine.

Medical Times

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CONTENTS

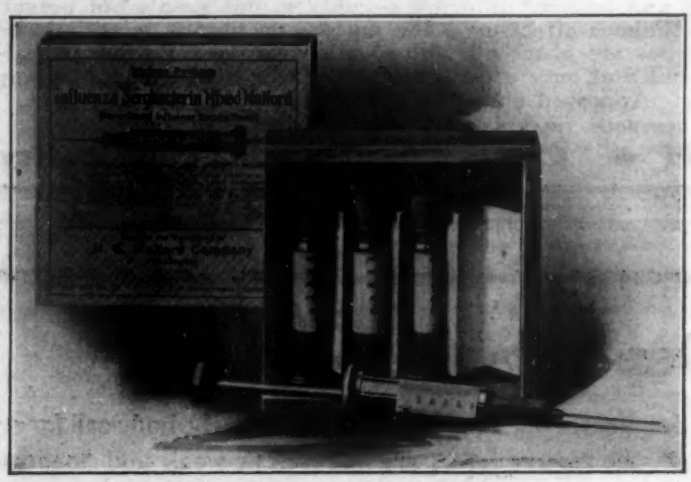
Established 1872. *Entered at the New York Post Office as Second class matter.*

Influenza Serobacterin Mixed Mulford

For Immunization Against and Treatment of Influenza and Common Colds

A combination of sensitized killed bacteria prepared from cultures obtained from a large number of patients suffering with acute infections of the respiratory mucous membranes.

Influenza Serobacterin Mixed is employed in catarrhal conditions of the respiratory tract, for treatment and prevention. It may be used either before a cold is fully developed to abort it, during the height of a cold to hasten recovery, or between attacks for prevention.



The usual method of administering Serobacterins is to employ the 4-syringe package, beginning with one-fifth to the entire contents of Syringe A and following with other syringes at two to five-day intervals, according to indications.

Syringes contain killed sensitized bacteria as follows:

	Syringe A	Syringe B	Syringe C	Syringe D
B. influenzæ	125	250	500	1000 million
Staphylococcus albus and aureus	250	500	1000	2000 million
Streptococcus	125	250	500	1000 million
Pneumococcus	125	250	500	1000 million
M. catarrhalis (group)	125	250	500	1000 million

Literature describing method of treatment and dosage sent on request.

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Malaria.

A review of the recent literature observes that the importance of the comparative ability of the different species of mosquito to transmit malaria is shown by the fact that between 100,000 and 250,000 dollars was saved in the sanitation of the Panama canal zone by the knowledge that anopheles malefactor was unable to transmit the disease.

Medical studies show that intravenous uses of quinine in doses of fifteen grains in a dilution of 250 to 300 cc. saline may be used by a competent physician with good results. The discomfort of the patient is quickly and effectively reduced and the benefit conferred is permanent. Alcohol is strongly contra-indicated.

Important factors in exterminating mosquitoes by drainage are outlined. A stream should have steep banks directly above and below the flow line, the course should be straight and free from obstructions. It is often cheaper to line ditches with concrete than to be repeatedly regrading and cleaning them. The only successful method of exterminating mosquitoes is by the destruction of their breeding place; birds or other insect or larva-feeding animals may reduce the number but will not eradicate the pests. Semi-refined and not crude oil should be used to spread over the surface of the water in this sort of work although drainage should always be preferred to oil treatment where possible. Just sufficient oil should be used to form a complete film.

The breeding place of *anopheles* in impounded waters are classified according to the relative importance as follows: (1) groups of pine needles when not closely compacted. (2) Débris consisting of bark, leaves and twigs. (3) Long grass lying on the water surface. (4) Dead leaves floating on the surface. (5) Logs, branches and stumps.

The loss of rural industries through malaria has been studied by the United States Bureau of Entomology. A plantation in the delta region of the Mississippi was selected for study because of the absence of such conflicting features as enteric fever and pellagra. Seventy-four families with a total of 299 individuals were included in the study. During the crop season of 1914 a total loss of 1,066 days of adult time occurred. A smaller investigation in Arkansas showed that the patients lost on an average 5.50 days for each attack.—(*Trop. Disease Bull.*, May, 1915.)

Frontal Sinus Tuberculosis.

J. B. Thomas, Palo Alto, Calif., says that tuberculosis of the frontal sinus must be a very rare disease, judging from the paucity of reported cases. Tuberculosis of the other nasal accessory sinuses is more common, though tubercle bacilli may not always be found. It is generally agreed that tuberculosis of the sinuses is secondary in practically all cases to a general or localized tuberculosis of the neighboring parts, or to both. Perforation of the sinus wall occurs as a rule during acute attacks with damming back of the discharge, pressure necrosis and thrombosis of the small vessels. Osteomyelitis, or infection of the orbit or cranium, may follow. He gives brief abstracts of the five hitherto reported cases of tuberculous frontal sinusitis, and then reports his own cases. In the first, the outer table became perforated and the patient recovered after operation. She attended her mother during a number of years of chronic phthisis and had herself suffered from Pott's disease of the spine, which had left her somewhat deformed. In the second case with osteomyelitis, epidural, subdural and cerebral abscesses, death resulted. In conclusion, Thomas says there are several factors that tend to protect the frontal sinus from infection; its high position and better drainage, the bactericidal action of the mucosa, cilia, mucus and tears, but a study of the statistics in sinus disease in postmortems of tuberculosis patients strongly suggests the probability that it occurs more often than is recognized. The diagnosis depends on careful bacteriologic examination of the sinus secretion, using as large a quantity as possible and employing sedimentation. The so-called antiforming method is a good one. Animal inoculation may be employed, care being taken to remove the secretion as directly from the sinus as possible. Tuberculin may be of value in the diagnosis. The other sinuses are apt to be involved and complicate the case. The brain complications are chiefly cerebral abscesses with or without meningitis. The treatment after the diagnosis should be early and surgical.—*J. A. M. A.*)

The Constipation Problem.

It is perhaps a conservative estimate that three out of every four individuals suffer in greater or less degree from constipation. The proportion so afflicted is certainly much greater than it was forty, thirty or even twenty years ago, this abnormal condition being commonly attributed to our so-called higher civilization. Lack of exercise probably plays a large part in the equation. The use of concentrated food-stuffs is undoubtedly another etiological factor. So widely varied are the specific causes, numerous remedial agents are necessary to meet the differing indications. Of late the "mechanical" laxative has been receiving attention from many therapeutists. There would seem to be warrant for this innovation. Obviously there are cases of constipation in which the use of an efficient intestinal lubricant or simple carbohydrate would be preferable to that of the cathartics commonly prescribed.

Of the various mechanical laxatives which are being offered for the consideration of physicians it is doubtful if any are more serviceable than American Oil (a colorless liquid petrolatum) and Agar (a Japanese gelatin derived from seaweed), both marketed by Parke, Davis & Co. Each of these products, after ingestion, passes unaltered into the intenstine, no particle of it being digested or absorbed. American Oil is a colorless, odorless, tasteless liquid petrolatum. As its name implies, it is of American origin. It is guaranteed to be free from any active or harmful substance, and to be fully equal to the best Russian oil formerly imported. It is of greater viscosity than most of the liquid petrolatums that are being offered, for which reason it is more efficacious as a laxative. The customary prescription is one tablespoonful of American Oil, before meals, two or three times a day. After the fourth or fifth day, when the desired effect is established, the amount may be reduced.

Agar, supplied in the form of dry granules, absorbs water and merges with the feces, keeping them uniformly moist and thus aiding peristalsis. One or two heaping tablespoonfuls, morning and evening (with milk or cream or mixed with a cereal food) suffices for the average patient.

Hypertrophied papillæ may be responsible for pruritus ani either as a result of their irritating effect on the anal mucous membrane, or the passage of hard feces may irritate the papillæ themselves, and so produce a reflex stimulation of the nerve terminals in the skin of the anal margin. Destruction of the papillæ by cauterization will produce a beneficial effect.

An Unusual Degeneration of the Cervix.

Alfred Smith, reporting to the Irish Academy of Medicine, said that the patient, aged sixty, the mother of sixteen children, consulted him on account of a profuse slimy discharge. The menopause came on ten years ago. She enjoyed good health up to last August, when she noticed a slimy discharge from her vagina. There was neither hemorrhage nor pain nor offensive odor. On making a bimanual examination, the vaginal portion seemed to have disappeared, the margins being flush with the vaginal vault, the os being so dilated that the index and middle finger could easily be passed in. The impression conveyed was that there was no internal os, that the cavity of the uterus was greatly dilated; the mucous membrane felt like velvet pile. This slight palpation caused hemorrhage. On curettage, large quantities of brain-like matter came away, as in cancer.

The pathologist reported non-malignant. A simple panhysterectomy was performed. The total length of the uterus was 12 c.m., fundus 3.5 c.m., cervix 8.5 c.m., greatest width 6.7 c.m. The fundus of the uterus is normal, but the cervical portion is greatly thickened. On section, this thickening is seen to be due to the transformation of the normal muscle wall into a spongy mass infiltrated with mucoid material; this mucoid material is directly continuous with a large amount of mucus in the cavity of the cervix. This change affects the whole contour of the cervix, though it is more marked in the anterior and left wall. The remains of the true cervical wall are represented by a thin layer of fibro-muscular tissue. No evidence of malignancy. The specimen is in the nature of a channeled mucous polypus, but is remarkable in that it engages more or less uniformly the whole of the cervical wall.—(*Dublin Jour. Med. Sci.*, Sept., 1915.)

Prevention of Cerebro-Spinal Fever.

Surgeon H. Sutherland, R. V., believes the best remedy for cerebro-spinal fever is to keep living and sleeping rooms open day and night.

If a strong wind be blowing against the windows on one side of the room it may be necessary to close them. In that case a board 6 inches deep should be fitted beneath the sash of all exposed windows. A better plan is to have a weather-board fixed outside the window at an angle of 45 degrees. This insures that the windows may be kept open 3 feet at the bottom in all weather conditions.

Persons must avoid draughts, with which free ventilation is not to be confused. A draught is a current of air, differing from the surrounding atmosphere in temperature and in velocity to such a degree that a sensation of chill is produced in an individual exposed to it. Thus a person between a fire and an open window is in a draught, but one among equable currents of moving air is not in a draught. The people to whom this refers are "delicate consumptives"; it is unlikely that measures beneficial to them would prove too severe for those in perfect health.

One other point demands special provision. All clothing must be dry, as damp garments draw heat from the body. Special rooms should be provided for drying wet clothes and boots at any time. All the evils of overcrowding are present when wet clothes are allowed to dry in a sleeping room, the heat being generated by the bodies of the occupants in close, confined air.—(*Lancet*, No. 480, 1915.)

The Causation and Treatment of Pellagra.

Before pellagra can be definitely treated the mystery which surrounds the causation of the disease should be dissipated. The view that pellagra is due in some way to the ingestion of maize, sound or unsound, is being gradually abandoned, and the two chief theories which now hold the field are, first, that which regards the malady as the result of an infection by a protozoal parasite transmitted by some insect; and secondly, that which classes pellagra among the deficiency diseases and as being due to the absence or insufficiency of some essential element in the patient's dietary. Many workers are engaged at the present time, particularly in America, in trying to solve the difficult problem of the etiology of pellagra, but so far none of them has been definitely successful. Recently Dr. H. E. Bond, of Jamaica, has summarized the work of various authorities on the subject, and has drawn our attention to a theory that pellagra may be due to a gastro-intestinal auto-infection (or alimentary toxemia), and that the actinic rays of the sun may assist in the development of the disease. Dr. Bond in his communication discusses the relations of the gastro-intestinal tract as well as of some other organs, such as the suprarenals and the thyroid, to the skin. He then considers the effects of exposure to the actinic rays of the sun, which, he says, can irritate the uncovered surface of the human body and so cause intense hyperemia, especially in subjects whose vitality has been already lowered from defective innervation. As a result of his studies he has arrived at certain conclusions and opinions which may be briefly stated as follows. Pellagra is an affection akin to Addison's disease. The causal bacterium is in the intestines, as indicated by the amounts of indol and skatol present; and it primarily affects the sympathetic and secondarily the central nervous system. There are factors in the actinic rays of the sun which can irritate the exposed areas of the human skin and intensify the condition. Pellagra should respond to treatment by gastro-intestinal antiseptics, such as calomel, beta-naphthol, or acetozone, administered internally; also by treatment externally with the usual protective ointments, one, for instance, consisting of beta-naphthol, balsam of Peru, and zinc ointment. As regards diet, Dr. Bond recommends the daily administration of ripe bananas, but salt fish is to be avoided. The patient must as far as possible be kept in the shade. These views are to some extent both new and interesting and suggest fresh food for thought; but they will require to have a good deal more evidence adduced in their support before they can be expected to receive the serious attention of pellegra experts.—(*The Lancet,* Aug. 21, 1915.)

Effects of Typhoid Fever on the Soldier's Heart.

Rohmer thinks that heart failure in typhoid fever patients is much more common among soldiers on active service than among civilians. The physical and mental strain imposed on the soldier in war are apt to cause more or less severe cardiac symptoms. In the healthy subject these symptoms usually disappear quickly with rest; but the prognosis is far worse when the soldier, suffering from these cardiac symptoms, develops typhoid. Among fifteen fatal cases which came under his observation all but three presented the signs of progressive heart failure. In many cases heart failure was the only cause of death. In other cases showing signs of pneumonia the pulmonary symptoms were so slight that he believed death, even in these cases, was due rather to the cardiac than to the pulmonary condition. Some of his patients had continued on active service in the trenches after the development of symptoms; and in these cases the disease ran a particularly severe course, owing to the weakness of the heart. Even in cases admitted early cardiac symptoms were extraordinarily common, and it was exceptional to find a normal heart, even in the subject of a slight attack of typhoid fever.

In times of peace the vascular symptoms induced by typhoid fever are mainly due to paralysis of the vasomotor center, leading to relaxation of the blood vessels. The heart meanwhile is seldom directly affected. But under the conditions of modern warfare the symptoms point to a primary cardiac insufficiency, due, no doubt, to the detrimental action of physical and mental exhaustion on the heart. At first the author gave early prophylactic doses of digitalis by the mouth. But he abandoned this procedure because it seemed to do no good, and interfered with the intravenous injection of strophanthin when the patient's condition was critical. He found this intravenous medication most effective, and he was also satisfied with the effects of camphor, caffein and suprarenin.—(*Deutsch. Med. Woch.,* July 22, 1915.)

Tuberculosis is an acquired disease, but certain constitutional types may be inherited which render the patient specially susceptible to infection, and there is reason to think that such susceptibility is an inherited character.

Urine containing blood is always albuminous, but the relative proportion existing between the red corpuscles and the serum depends upon whether or not the hemorrhage is associated with inflammation.

Acute Post-operative Capillary Bronchitis.

H. L. Whale reports two odd cases. In September, 1914, he operated on a man aged 25, enucleating the tonsils. They were fibroid and not easy to remove, the operation lasting 25 minutes. The anesthetic given was, for the first few minutes, ether and chloroform in equal parts; for the remainder of the operation pure chloroform was used, because there was a good deal of oozing. At the conclusion, when swabbing out the mouth with dry swabs, a large amount of froth suddenly began to well up. This was brick-red, like a mixture of clean blood and hydrogen peroxide. It was so profuse that, except for the sake of keeping the air-way clear, there was no necessity to assist in the expulsion of the froth by swabbing, for as the patient lay on his side it poured out in a steady stream. As the bleeding gradually ceased the froth became colorless. He became and remained cyanosed, and his chest was everywhere full of moist râles. He was given oxygen, but there was no change in his alarming condition for six hours. At the end of this time the cyanosis, flow of froth, and signs in the chest disappeared as suddenly as they had occurred.

August 2, 1915, Whale was resecting the septum and removing a nasal spur from an adolescent male. Anesthesia was induced with ether, and after that only pure chloroform was used. At the end of the operation, half an hour later, the patient behaved in a way identical with the former case. In no detail was there any difference, except that as treatment the second patient was given atropin sulph. hypod. gr. 1/100, and not oxygen, and that the sudden cessation of the condition occurred after only one hour. In neither case was any hydrogen peroxide used.

Each of the above patients had healthy lungs and heart and was in the hands of a competent anesthetist. Each of them had been given the usual preliminary injection of atropin. Neither of them was given more than a small amount of ether, and that only at the beginning; whereas the bronchitis supervened in each case about half an hour later, when the anesthetic had been stopped. The condition presented by these two patients differed from ether pneumonia in that the former was of immediate onset and short duration, and seemingly only a bronchitis.—(*The Lancet*, Aug. 21, 1915.)

The Remedy of Choice in Cardiac Affections.

It is interesting to note the growing interest medical men are taking in Cactina Pillets as a safe and dependable cardiac tonic. This is not surprising; indeed the only surprising feature is that the efficiency of this remedy has not been more generally realized. Hardly any one drug, with the possible exception of digitalis, has a broader field of activity, and there are many competent observers who place it first among cardiac remedies. Experience has shown that the most conspicuous influence of Cactina upon the heart is its effect on the local nutrition and consequent increase of the muscular-motor energy. Certainly it is the heart tonic par excellence, since it increases heart action and restores nerve function with a promptness that is rarely observed with any other remedy.

Made from a dependable preparation of Mexican Cereus Grandiflorus, Cactina Pillets are especially effective in functional disorders of the heart associated with feeble, irregular pulse, more or less dyspnea and a sense of chest oppression. In such cases the effect of Cactina Pillets is exceedingly gratifying, the heart being promptly steadied and strengthened, and dyspnea markedly relieved. Tachycardia and palpitation are quickly controlled, and the precardial sensations which cause so much apprehension are soon dispelled.

In many cases of renal hematuria the blood may suddenly appear and as suddenly vanish, soon to be followed by a profuse recurrence; such sudden changes are in some cases accompanied by the expulsion of long worm-shaped clots.

If more of the profession would come to look upon the uterine curette as a diagnostic instrument chiefly, more women would be saved from the development of inoperable uterine cancer.—*American Journal of Surgery.*

Conjunctivitis Caused by Face Powder.

Nelson M. Black asserts that face powder sets up a distinct type of conjunctivitis specially marked by very stringy mucilaginous secretion and intolerable itching. When the puff is applied to the face a portion of the fine rice flower dust is driven upwards and lodges in the moist conjunctiva, where it forms a mucilage, which is not dislodged from the conjunctival cul-de-sac by the lacrymal secretion. The woody cells of the hard exterior of the rice grain swell, and the angular corners produce an irritation which is aggravated by rubbing. The cul-de-sac should be flushed with a normal salt or boric solution and an ointment of equal parts of lanolin and vaselin applied; it causes an agglutination of the cells, which can then be more readily washed out.—(*Annals Optith.*)

C. D. Lockwood believes round ulcer of the stomach and duodenum are commoner in children before puberty than generally believed (*Surg., Gyn. and Obst.*). He has obtained data on 125 ases.

Murray found streptococci externally on the anal skin in 19 cases of true chronic pruritus, and says that other organisms, like the bacillus coli, may complicate the infection.

The spread of tuberculosis is favored by uncleanliness, overcrowding and imperfect ventilation, and is hindered by the opposite conditions. The risk of infection is reduced to a minimum by these methods: The careful disposal and disinfection of the sputum and other discharges. The disinfection or destruction of soiled handkerchiefs, clothes, and linen. The removal of dust by frequent moist cleansing of the floors, walls, etc., of the rooms. The supply of abundant air space latter is the best situation for children because in and free ventilation with fresh air.

Hematuria is usually the first sign of a bladder cancer. The passage of bloody urine, even though it is not soon repeated, is sufficient indication, in an adult, for a cystoscopic examination.—*American Journal of Surgery.*

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